The Rise of the US Dollar as World Money

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by

Kyuteg Lim

Ustinov College
Department of Geography
Durham University

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Abstract

This thesis argues that the globalisation of finance is rooted in the post-war processes of monetary transformation that gave rise to the US dollar as world money. It thereby contributes to the field of International Political Economy (IPE) which, to date, understands financial globalisation to be grounded in either the efficiency of financial markets, the interest of dominant states, or new private institutional developments. To give money a central place in the analysis of financial globalisation processes, this thesis develops a heterodox perspective that identifies three essential features of modern moneyness: money of account, the transferability of credit and debt relations, and the constitutive role of the state (especially central banks). During the early Bretton Woods era, the US dollar distinctively emerged as international money of account to settle claims and debts of European states through the operation of the EPU. It was not until the emergence of the Eurodollar market in the 1960s, however, that the US dollar developed its capacity to transfer dollar-denominated credit and debt relations across borders, largely as a result of European central banks placing their US dollar reserves with commercial banks operating in the offshore money market. The breakdown of the Bretton Woods system in 1971 deepened and widened both the role of the US dollar as world money of account and the dynamic transferability of dollar-denominated credit and debt relations, as the end of the link between gold and the dollar led US government debts to be regarded as the most sought-after debt. US government debts were foundational for the rise of the US dollar as world money and the process of financial globalisation. Finally, when managing inflationary pressures through the Volcker Shock, the Federal Reserve began to develop its capacity to deal directly with both the US money market and the Eurodollar market, thereby emerging as a world monetary authority able to manage the recurrent crises of globalising finance. Through the historical processes of monetary transformation, the US dollar was established as world money

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List of Abbreviations

APF	Asset Purchase Facility
BIS	Bank for International Settlements
BWS	Bretton Woods System
CD	Certificate of Deposit
CMA	Cash Management Account
ECA	Economic Cooperation Administration
EPU	European Payments Union
EMA	European Monetary Agreement
FDIC	Federal Deposit Insurance Corporation
FOMC	Federal Open Market Committee
GDP	Gross Domestic Product
IBF	International Banking Facility
IMF	International Monetary Fund
IPE	International Political Economy
LET	Local Exchange Trading
NOW	Negotiable Order of Withdrawal
MMF	Money Market Mutual Fund
OEEC	Organisation for European Economic Co-operation

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Statement of Copyright

INTRODUCTION

1. Introduction

In the post-Bretton Woods era, one of the most visible characteristics of the global political economy has been the unprecedented growth of global finance, which has been largely uninterrupted by a succession of financial crises. The rapid expansion of global finance has been seen to be decoupled from the pace of the real economy. The relationship between finance and the real economy is, thus, the least understood economic phenomenon in the global political economy. A wide range of scholarship across academic disciplines has focused on unearthing the complex process of financial globalisation through various analytical framings, such as the efficiency of markets, the power and interests of dominant states, and new institutional developments. All seem to recognise the role of the US dollar as an important component of financial globalisation. The role of the US dollar is, however, passively limited to facilitating economic transactions when it comes to the actual analysis of the complex process of financial globalisation. The geopolitical balance of power has changed, and markets have evolved, but the conceptualisation of the dollar remains unchanged.

Understood as a passive medium of exchange or exchangeable commodity, money facilitates real economic transactions in production and trade and merely underpins financial transactions. Consequently, money has very rarely been taken to be an appropriate object of analysis for the study of financial globalisation processes. This is true of both orthodox economic thinking and critical political economy as well, even though the role of money could be said to be vital to the process of global financial expansion. However, this thesis will show that, by theorising money differently and challenging assumptions about its place in market exchange, money is no longer merely a passive

facilitator of both the real economy and finance. This thesis promotes a revisionist narrative of financial globalisation. Modern money provides a means of account for credit and debt relations and, therefore, is actually crucial to the dynamic transferability of credit and debt relations via the financial markets (Ingham 2004a). The vital question, therefore, is what are the features of money and processes of monetary transformation that enable global finance to continue to grow and expand despite seemingly fragile financial crises and the decline of the US economy? And, as this thesis will show, this is a question that requires to revisit the rise of the US dollar as world money during the Bretton Woods era in order to reveal the key underlying mechanism of financial globalisation.

2. Aims and Arguments

This thesis aims to make two specific contributions to the study of money in the heterodox tradition of monetary thought and to the study of the US dollar as world money in the field of International Political Economy (IPE). First, my review of various theories of money, in particular the heterodox monetary school, gives rise to a conceptual framework which emphasises three defining features of 'moneyness': money as abstract measure of value, money as the transferability of credit and debt relations, and money as the constitutive role of the state. For modern money to become dynamic well beyond being a medium of exchange, it should possess the three essential features of money. This thesis shows how the three essential features of the US dollar can be established outside the US monetary space. This money-centred perspective is able to analyse the significance of historical events and episodes as a process of monetary transformation in a way that opens out into a wider and deeper contribution to the study of money and finance.

This thesis also aims to reconstruct the history of the rise of the US dollar as world money by revisiting key historical events and episodes in order to untangle the underlying monetary process of financial globalisation. Analytical chapters offer a detailed process of monetary developments of the US dollar

and therefore show how monetary developments of the US dollar were closely linked to the expansion of global finance. This thesis provides a revisionist history of the emergence of the US dollar as world money, not concerning a process of monetary expansion dictated by the process of the real US economy, but specifying a dynamic process of monetary development as the key mechanism of financial globalisation that is relatively independent from the process of real world economy. In particular, the dynamic character of the US dollar lies in US government debts, which are foundational for the rise of the US dollar as world money and financial globalisation.

The main argument of this thesis is that the rise of the US dollar as world money should be understood as neither a *natural* outcome of the strength of the real US economy nor a *direct* result of the political power of the US state, but as a process of monetary transformation that constitutes four key developments. First, the US dollar distinctively emerged as an international abstract measure of value from the 1944 Bretton Woods Agreement and began to be actually practiced through the European Payments Union (EPU) during the 1950s. The US dollar began as an operating unit of account of Bretton Woods institutions. The fixed rate between gold and the US dollar was expressed as the US dollar's abstract measure of value. Through the operation of the EPU, in particular, the US dollar as an international measure of value was actually utilised to settle claims and debts of European states; the US dollar performed an EPU unit of account. Thus, the US dollar as an abstract unit of account was in part established outside the US. Meanwhile, the US dollar did not come to exhibit the other two essential features of moneyness during this period. The US dollar did not develop cross-border transferability of dollar-denominated credit and debt relations and the role of the Federal Reserve outside the US.

The second development of the US dollar involves the dynamic nature of credit and debt relations, made transferable through the Eurodollar market, where the institutional practice of the abstract

dollar unit was combined to create a historically unique process of US dollar production. That is, European central banks began to place US dollar reserves, *US government debts,* directly or through their interaction with commercial banks, in the Eurodollar market and transformed them into private US dollars widely acceptable to international banks. The wide transferability of the US dollar was facilitated by the institutional practice of the abstract dollar unit. Private bank dollars, which were brought to the Eurodollar market by US banks during the 1960s, were integrated into the dynamic process of monetary transformations. The underlying mechanism of the expansionary Eurodollar market was dependent on the monetary development of the US dollar as embodying the transferability of credit and debt relations, denominated in the abstract dollar across borders. While the two essential features of the US dollar were further developed through the Eurodollar market, the Federal Reserve did not play a decisive part in this monetary development.

The end of the Bretton Woods system in the early 1970s intensified the US dollar's two monetary transformations that were already taking place in the Euromarkets. The end of the link between gold and the US dollar transformed the latter into global money of account and the world's high-powered money. The breaking of the gold/dollar link led to the consolidation of US money of account as an institutionally secured measure of value in unstable global finance. Various debts, issued in US money of account, were relatively secure, even though the external value of the US dollar was undervalued in the early 1970s. In particular, US government debts, provided by the Federal Reserve, secured the international practice of US money of account when issuing debt in the first place in the Euromarkets. Furthermore, the end of the Bretton Woods system caused a number of central banks, including those of Japan and oil-rich countries, to start accumulating US government debts dramatically and followed the European central bank practice of placing US government debts in the Eurodollar market. The new hybrid forms of money, such as certificates of deposit (CDs), contributed to the revolutionary development of the US money market and the dynamic Eurodollar markets throughout the 1970s.

The historical construction of the US dollar as world money further required the establishment of the Federal Reserve as a global monetary authority over the Eurodollar market during the Volcker Shock between 1979 and 1982. In order to break the linkage between the dynamic money markets (the Eurodollar market and the US money market) and inflationary pressures in the US, the Federal Reserve intervened directly in the money markets by targeting total banking reserves; that is, the US central bank intentionally created extreme market uncertainty by injecting highly unstable interest rates into the money markets. Unassured about interest rate decisions, banks were forced to pay careful attention to what was decided at the monetary policy-making meeting of the Federal Open Market Committee. Even though the US central bank failed to control the growth of total banking reserves, it obtained firm control over the money markets and brought down inflation with the recession of the global and US economy. The Federal Reserve also opened privileged access to US government debts for any US-based depository institutions and expanded the term of eligibility for acceptable collateral as a guarantee of liquid supply in future.

A reconstruction of the history of the US dollar as world money shows that changing characteristics of the dollar were the inner constitutive mechanisms of financial globalisation. That is, the transformation of the US dollar as an intangible money of account and the transferability of credit and debt relations into world money of account and the world's high-powered money enabled global finance to grow and expand, though seemingly fragile and unstable. Modern credit money provides the foundational base for global finance to develop its own trajectory independent of real economic expansion. In particular, US government debts are foundational for the securement of the continued practice of US money of account and the transferability of dollar-denominated credit and debt relations across borders. The foundation of the US dollar as world money rests on the public character of the US dollar.

3. Rationale

Across academic disciplines, and in economics in particular, the rise of the US dollar as world money has been understood as a natural outcome of the expansionary process of the US's real economy, such as in production and trade. The spontaneous rise of the US dollar, used in the sphere of market exchanges, fundamentally derives from the dominance of the US economy in international trade. The primary character of the US dollar is thus defined as a medium of exchange in lubricating international trade (Kindleberger 1967; Swodoba 1968; Krugman 1984). The international rise of the US dollar has thus been seen as an uncontested by-product of the US's real economic processes and as not requiring any further explanation in its own right. Barry Eichengreen (2011), for example, shifts the focus of his analysis from manufacturing and trade competitiveness to the financial competitiveness of the US economy, but the continued dominance of the US dollar is still understood as a by-product of the size and strength of the US economy.

Chapter 2 will review three waves of IPE literature in detail. Unlike the purely economic characterisation of the US dollar, these three waves of IPE literature have subjected the historical process of dollar development to serious analysis in ways that go well beyond the sphere of international trade. The rise and place of the US dollar as world money is linked to the exclusive monetary monopoly of state sovereignty in the first wave of IPE literature, such that the historical development of the US dollar is viewed as deriving *unquestionably* from the strength of US state power during the Bretton Woods period (e.g. Strange 1971). As will be argued throughout this thesis, the relationship between the US dollar as world money and the US state is certainly a very important analytical consideration, but this nonetheless overlooks that the state is not the only issuer of money. The first wave of IPE literature cannot explain how the rise of the dollar was related to the expansion of financial markets.

The second wave of IPE literature shifts analytical focus away from the political characterisation of the dollar's role as resulting from state power and moves towards financial market processes. Here, the expansion of financial markets, deriving from either the birth of the Eurodollar market (Frieden 1987; Cerny 1983) or the end of the Bretton Woods system of fixed exchange rates (Strange 1986; Walter 1991; Germain 1997; Langley 2002), is considered the real agent of expanding the volume of dollar-based financial transactions. In the second wave of IPE literature, the historical rise of the dollar is therefore believed to derive *exclusively* from the expansion of financial markets. The primary character of the US dollar is seen as an exchangeable commodity in financial market processes. This exclusive focus on financial markets, however, puts the cart before the horse: it does not recognise how money provides a means of account for credit and debt relations and, therefore, is actually crucial to the dynamic transferability of credit and debt relations via the financial markets. It also overlooks the process of constructing a new institutional framework through which the explosion of global finance took off in the first place.

For this reason, the third wave of IPE literature pays primary attention to new institutional developments within the key centres of global finance and their externalisation, which made possible the international rise of the US dollar. The new institutional framework is associated variously with the emergence of a new private monetary space, the London-based offshore Eurodollar market (Burn 1998, 2006), or new financial practices and relations, such as the direct involvement of banks and their customers with financial markets (Seabrooke 2001, 2006) and the liability management of banks (Konings 2007, 2011). Such institutional developments were projected in the international realm and subsequently transformed global finance. As this thesis will suggest in multiple ways, the new institutional framework was indeed key to the process of developing the US dollar into world money during the 1960s and 1970s. However, while in the extant third wave of IPE literature the US dollar is primarily characterised as more than a neutral medium of exchange, the US dollar nonetheless

remains primarily *private* in nature. Private dollar debts, issued by US banks, are assumed to be transferred *incontestably* to foreign banks in the offshore Euromarkets. The assumed transferability of US private dollar debts between US banks and foreign banks, however, requires further explanation and recognition regarding the importance of public authority in the universal acceptance of the US dollar in Euromarkets.

4. Conceptual Framework

Underpinning the analysis that this thesis offers of the rise of the US dollar as world money is a reading and further development of the social theory of money and, in particular, of the heterodox monetary school. One of the central tenets of the heterodox monetary school is that the essence of money derives from measuring debts, not commodities. The inherent link between money and debt is established by the state. That is, the state plays a key role in the process of monetary development, relatively independent from the real economic process. More specifically, the creation of transferable government debts to private actors is foundational for the general acceptability of bank credit money in sovereign monetary space because government debts are simply the most sought-after debt. Therefore, the study of money cannot be separated from the study of the state, the central bank in particular.

This thesis attempts to make a specific contribution to the understanding of a feature of modern credit money to which the heterodox school of monetary thought has, to date, paid insufficient attention: the process of monetary production in offshore monetary space. Accordingly, this thesis highlights the hybrid relationship between money, the state, and private banks in the process of developing the US dollar as world money. More broadly, this thesis elaborates upon the heterodox school, largely ignored in mainstream economics, sociology, and politics, in order to show its relevance in understanding the contemporary global monetary and financial system. The conceptual framework, developed in Chapter

1 of this thesis, asks what constitutes 'moneyness' in a fundamental sense. That is, what are the key characteristics of money which need to be essentially performed beyond money acting as a medium of exchange? My reading of various theories of money, in particular the heterodox tradition of monetary thought, leads to a conceptual framework that identifies and elaborates upon three essential features of money: money of account, the transferability of credit and debt relations, and the constitutive role of the state. The three dimensions of moneyness are briefly explained as follows.

The first fundamental feature of moneyness to be considered here is money of account, or a measure of abstract value, which has been present in ancient and modern societies. Money of account is abstracted in monetary units. For example, in the nineteenth century in Britain, the pound as an abstraction was constituted by gold sovereigns, banknotes, and bills of exchange (Rowlinson 1999: 64-65). The key essence of moneyness is money of account, not physical monetary forms, which have kept changing and, to some extent at least, disappear as money becomes 'dematerialized' (Leyshon and Thrift 1997). Money of account has abstract purchasing power, but it is not reduced to the value of commodities. Rather, the human idea of money of account originates from measuring debts, not commodities (Innes 1913; Grierson 1977; Ingham 1996, 2004a; Wray 1998). Money as money of account has evolved largely independently of the production and exchange of commodities (Ingham 2004a). Unlike the commonly received concept of money which, in orthodox and Marxian economics, directly measures the value of commodities and provides a standard price, the heterodox concept of money situates it as a measure of value that acts as a means of producing price lists and debt contracts (Keynes 1931). There is no direct relationship between money and commodity or commodity exchange.

Second, further distinguishing itself from orthodox and Marxian theories of money, the heterodox school argues that money is 'a social relation of credit and debt denominated in a money of account' (Ingham 2004a: 12). Money as a social relation of credit and debt means that money is no more than

a claim on socially produced goods and services. That is to say, the possessor of money is able to purchase goods, services and (financial) debts issued by the state and private actors. Money is a 'credit' for money users whereas money is a 'debt' for money issuers (Innes 2004 [1913]: 30). In particular, with the emergence of central banking in the late seventeenth century, private debts, such as bills of exchange and banknotes, became monetised and integrated into the sovereign monetary space, indicating that modern credit money as a hybridised conception of private debt and state currency became fully accepted and transferable in eighteenth-century English society (Ingham 2004a, 2004b). Understanding modern credit money as the hybridised conception of private credit and state currency makes a clear distinction, which the sociological theory of money is not interested in, between ancient money and the dynamic nature of modern money. Keynes (1931) and Schumpeter (1994 [1954]) emphasised that some private credits became money. Modern credit money as fully transferable credit-debt relations in sovereign monetary space 'exists *independently of the production and exchange of commodities'* (Ingham 2004a: 12, emphasis original). In fact, modern money as the transferability of credit-debt relations has been expanded and spread internationally since the seventeenth century in England (Amato and Fantacci 2012).

Finally, the heterodox school, unlike the contemporary sociology of money, takes into serious consideration the crucial role of the state in monetary development. The heterodox school argues that political authority, the state in general, is constitutive of producing the essential characteristics of money as money of account and the transferability of credit and debt relations. Money of account cannot be established by the process of market exchange, since changing myriad exchange ratios of commodities cannot be settled. Money of account can be established *only* by the state as a means of measuring and standardising tributes or taxes levied by the political authority (Wray 1998: 50). The state therefore determines a particular form of money, denominated in its declared money of account, that its members use for tax payments (Knapp 2003 [1924]). Money of account is sovereign. The value

of money originates from the state (Bell 2001: 156). However, the state cannot force its members to use a particular monetary form for private activities, such as commodity exchange or hoarding; the so-called economic functions of money, that is, money as a medium of exchange and a store of value, are subsequently developed (Wray 2012: 49).

With regard to the emergence of modern credit money as transferable credit and debt relations, the state played a critical role. That is, government debts issued to finance wars were able to be transferable through the operation of central banking since late seventeenth-century England (Ingham 2004a). Private bank debts like banknotes and bills of exchange were gradually integrated into the centralising process of the English monetary system based on the extending role of Bank of England notes and government debts throughout the eighteenth century. The role of the state, in particular the operation of the central bank, was constitutive of developing modern credit money into a hybridised process of integrating private credits into state currency. The bank credit became fully transferable and was used to pay taxes. However, the transferability of credit and debt relations constitutes a pyramidal structure in which, in a broad sense, government debts are positioned at the top, private bank debts at the middle, and nonbank and corporate debts at the bottom (Wray 2012: 85-87). Modern credit money refers to the government and bank debts. Nonbank debts, such as corporate bonds or financial assets, are not money but credit because they are not used directly to pay government taxes. Therefore, the price of nonbank debts is charged for 'the loss of liquidity incurred by whoever gives money in exchange' in the financial market (Amato and Fantacci 2012: 20). The maintenance of the distinction between money and credit is key to the management of the modern monetary system. The responsibility for maintaining the credibility of modern money, denominated in sovereign money of account, primarily falls on the central bank as a monetary authority.

5. Analysis and Findings

In this thesis, the analytical framework that identifies and elaborates upon the three essential features of moneyness—money of account, transferable credit and debt relations, and the constitutive role of the state—is used to explore four case studies: Bretton Woods institutions between 1944 and 1958 (Chapter 3), the Eurodollar market in the 1960s (Chapter 4), the end of Bretton Woods in the 1970s (Chapter 5), and the Volcker Shock between 1979 and 1983 (Chapter 6). While Chapter 2 reviews the three waves of IPE literature on the rise of the US dollar, insights from the IPE literature show the four case studies are historically significant for the rise of global finance. However, this thesis will reinterpret the four historical cases as the process of monetary transformation. The money-centred perspective taken up and developed by this thesis is thus crucial to revealing how different historical developments in the role of the US dollar contributed to a transformation that ultimately impacted all of the essential features of money. Put another way, for the US dollar to achieve its contemporary position as world money, the US dollar needed to exhibit all of the essential features of moneyness beyond US sovereign space.

Chapter 3 commences an analytical journey on the development of the US dollar as world money by examining Bretton Woods institutions during the early Bretton Woods era. The three essential features of moneyness are utilised to identify which, if any, of these essential features the dollar could be seen to possess outside the US. Contrary to the conventional image of the US dollar, injected by the Marshall Plan into Western Europe, the US dollar peculiarly emerged as an international measure of value through international monetary institutions, while the dollar did not possess the other two essential features of moneyness outside the US during this period. The US dollar as cross-border transferability of credit and debt relations and the constitutive role of the US central bank had not been developed yet. The emergence of the US dollar as an international measure of value was initially nurtured by the

establishment of Bretton Woods institutions in 1944. The fixed rate between gold and the dollar was expressed as US money of account, an abstract dollar unit. Through the operation of the EPU, the US dollar as an international measure of value was actually used to settle the claims and debts of EPU members. Thus, the first transformation of the US dollar involves the institutionalisation of the US dollar as an international measure of value throughout international monetary institutions, not throughout markets.

Chapter 4 continues the historical analysis of the rise of the US dollar as world money by examining the growth of the Eurodollar market in the 1960s. This chapter provides conceptual reasons why Eurodollars need to be seen as US ordinary dollars and reinterprets the rapid expansion of the Eurodollar market as a hybridised process of US dollar production, in which foreign central banks and international banks, including US banks, participated. Contrary to the conventional image of the Eurodollar market as private monetary space for private banks, central banks were actively involved in the offshore market. That is, the second monetary transformation that contributed to the rise of the US dollar as world money is linked to the practice of foreign central banks in the Eurodollar market during the 1960s. European central banks, for various reasons, began to place some proportion of their dollar reserves, US government debts, in the Eurodollar market. It was US government debts, placed by European central banks, which created a dynamic process of new US dollar production in which the public character of the US dollar as US government debts was transformed into private US dollars, accepted and transferred by private international banks. The wider transferability of the US dollar was facilitated by the institutional practice of US money of account. In this regard, the US dollar developed the dynamic transferability of international credits and debt relations through the offshore money market, and the scope of the abstract US dollar unit was further expanded. Meanwhile, the Federal Reserve did not play a decisive role in the monetary transformation of the US dollar during this period.

Chapter 5 proceeds the analysis of the rise of the US dollar as world money by examining the end of the Bretton Woods system. Building on the two monetary developments of the US dollar, this chapter attempts to untangle the further monetary transformation of the dollar, unleashed by the end of the Bretton Woods system. This historical event transformed the US dollar into world money of account and the world's high-powered money. The end of the link between gold and the dollar blurred distinction between US money of account and various US debts; it led to the latter being regarded as secured debts in unstable global finance. In particular, US government debts, that the Federal Reserve provided to international creditors of a troubled US bank in 1974, secured the practice of US money of account in issuing debt in the Euromarkets. US money of account became an institutionally secured measure of value.

The end of the Bretton Woods system intensified cross-border transferability of dollar-denominated credit and debt relations in two ways. The end of the link between gold and the dollar caused a number of foreign central banks to dramatically accumulate US dollar reserves. Other surplus countries, such as Japan and oil-rich countries, undertook practices that largely followed those of European central banks in the Eurodollar market during the 1960s. In this regard, the US dollar in the form of US government debts became the world's high-powered money. Furthermore, the dynamic expansion of dollar-denominated credit and debt relations was further consolidated by the transformability of US bank deposits, specifically certificates of deposit (CDs), into financial assets. The transformation of US bank credit money, which was tightly regulated in the 1960s, contributed to the revolutionary development of US money and Eurodollar markets in the 1970s. The intensification of the monetary transformation indicates that, while the end of the Bretton Woods system may have heralded a financial transformation, this financial transformation was only possible because the end of the Bretton Woods system furthered a monetary transformation already underway in the 1950s and 1960s. The intensification of the monetary transformation was the key underlying mechanism of financial

transformations underway since the early 1970s.

Unlike the previous chapters, which attempt to reinterpret important historical cases through a lens of the three essential features of moneyness, Chapter 6 takes the Volcker Shock as a key moment to explore the linkage between the US dollar and the Federal Reserve, since the remaining essential feature of the US dollar as world money lies in that monetary relationship. In the late 1970s, the Federal Reserve was exceptionally concerned with the exponential growth of the Eurodollar market, which not only contributed to inflationary pressures in the US but also undermined the effectiveness of Federal Reserve monetary policies. Thus, the October operational shift of 1979 to monetary targeting was a direct attempt of the Federal Reserve to re-establish itself as a global monetary authority over the Eurodollar market and the US money market. The US central bank, led by Paul Volcker, intentionally created extreme market uncertainty by injecting highly unstable interest rates into the money markets. Private banks were forced to pay careful attention to what the US central bank decided in the process of monetary policy making due to the uncertain nature of determining their interest rates in the money markets. Inflationary pressures were brought down with the recession of the global economy and the US economy. The US central bank was firmly able to control short-term interest rates through the daily buying and selling of US government debts in the money markets.

A focus on four key historical monetary developments that contributed to transforming the US dollar into world money contrasts sharply with the existing literature. The foundations of the US dollar's development into world money are not the expansion of the US's real economy and the ways in which the US dollar lubricates international trade. Not only does such a view misunderstand the very nature of money, but the economic explanation of the dollar's rise obscures the significance of the role of key agents of monetary transformation, such as foreign central banks and the Federal Reserve. The various waves of IPE literature, meanwhile, have certainly enriched understanding of the rise of the US dollar

as world money. The IPE literature has recognised the importance of the constitutive roles of the states, financial markets and particular institutional practices. Nevertheless, the implicit distinction between public versus private money in the IPE literature does not help to conceptualise the hybridised process of US dollar production in the offshore money market. The money market has been seen primarily as the exclusive monetary space of private banks. However, the active participation of central banks, both directly and indirectly through their commercial banks, contributed greatly to the rapid development of the Eurodollar market in the 1960s. The distinction of the dollar as public versus private money has led the constitutive role of the central bank to be overlooked in processes of monetary transformation. More importantly, the rapid development of the Eurodollar market brought about the extended role of the Federal Reserve in particular, since the international money market was largely operating on the US dollar as US money of account, which not only denominated international credits and debts but also helped to transfer them globally as well. The private power of global finance that is typically emphasised by the second and third waves of IPE literature in particular actually required the extended role of the US central bank beyond US sovereign monetary space. By correcting this historical misconception, the significance of this revisionist narrative enriches and enables to make sense of contemporary issues as discussed in Conclusion.

6. Research Methodology

The research methodology adopted in this thesis is a historically oriented method in the tradition of hermeneutics (Ingham 1984, 2004a; Germain 1997; Langley 2002; Knafo 2013). In a broad sense, 'there is no teleology history should follow' (Amin and Palan 1996: 211; Amoore et al 2000: 67). Randall Germain (1997) provides a historical methodology for how to engage history with IPE on the basis of his ontological view of the world, which lies in the tradition of hermeneutics against positivism. Germain suggests that a way to engage history is through a 'historical mode of thought,' wherein

historical knowledge can be constructed 'only through a reflective three-way dialogue between historical evidence, an understanding of the motivations of historical subjects, and the historian or social scientist' (Germain 1997: 175) In reaction to the IPE's turn to history (Amin and Palan 1996), Amoore et al (2000) further emphasised that 'the call to historicize IPE overlooks the problem of how the researcher is situated in relation to . . . the broader issue of connecting a particular claim to "know" to a prior understanding of "history"' (54). Indeed, Amoore et al emphasised the special role of the researcher as 'agent' and 'context' in the process of constructing historical knowledge in IPE, and they promoted diversity of agency. Diversity of agency should be promoted and welcome.

Nevertheless, it seems clear that what Amoore et al claim is about how to construct historical knowledge: a theory of knowledge in IPE. That is to say, they emphasise a particular ontological world view before taking on research methodology. Indeed, it is understood that how a researcher adopts a particular ontology can lead to an epistemological positon and a particular methodology followed. In other words, epistemological and methodological positions are derivative of ontologies, for example, in the case of Marxism (Blyth 2002). The concern with ontological and epistemological positions, though inevitably methodological, brings back to us a theory of knowledge which is ontologically irresolvable (ibid). The issue of constructing knowledge would prevent us from moving forward in the knowledge of social science, and IPE as well, because it falls into 'a problem of incommensurability' (Blyth 2002: 295) and can constrain the way the work of different perspectives can be evaluated. Mark Blyth raised an interesting question: '[I]f ontologies are mutually exclusive, and if epistemologies and methodologies are both derivative and tied to particular ontologies, then does this not reduce political science [social science] to a long-range oratorical bombardment? "My ontology is right!" "No I'm right" And so on' (2002: 295). Blyth contrasted two extremes of positivism and interpretism through the use of Hillary Putnam's statements. Truth claims of extreme positivism rest on 'a single statement' involving 'some variant of only things that can be tested as meaningful and taken as solid knowledge.

This statement cannot be tested. As such, it is unfalsifiable by its own logic and positivism becomes self-refuting' (2002: 295). In the same manner, Putnam argues that extreme relativism also rests on the statement that 'all things are relative and there can be no position of absolute truth', which indicates 'the impossibility of adjudicating positions' (ibid: 296). However, 'people agree about what may be true at any given time (for example, slavery is good, slavery is bad) and, given that such "conventional wisdoms" persist over time, this suggests that, *at any given point in time,* some "things" must be "more true" than others by simple virtue of the fact that people believe them' (ibid, emphasis original). If this is the case, then relativism must also be a self-refuting proposition.

The position of this thesis in the tradition of hermeneutics indeed supports the idea of 'a multiplicity of agents and forms of agency' (Amoore et al 2000: 66). As Amoore et al pointed out, our interpretations are not complete (65). But it does not necessarily mean that there is no basis to compare and evaluate the work of researchers, regardless of their ontological and epistemological position. One of the critiques of poststructuralism as a variant of the interpretist tradition is that it offers 'a complete break with objectivity' (Marsh and Furlong 2002: 29). Poststructuralism indicates that '[o]ne person's view of the world, and of the relationship between social phenomena within it, is as good as another's view . . . there is no basis on which to judge the validity of their knowledge claims' (ibid: 27). Bevir and Rhodes (2002) argue that '[a]lthough we do not have access to pure facts that we can use to declare particular interpretations to be true or false, we can still hang on the idea of objectivity' (142). The idea of objectivity can arise from 'using criteria of comparison: accuracy, comprehensiveness, consistency and opening new avenues of enquiry' (ibid). Therefore, we are able to compare and criticise the work of the researcher as historical agent, regardless of ontological and epistemological concerns, and thus evaluate which interpretation is better than others. Many social scientists such as Geoffrey Ingham (1984, 2004a) and Samuel Knafo (2013) just do that beyond their disciplinary boundaries.

The point of engaging a theory of knowledge is that we should embrace 'the possibility that rival ontological positions are not only irreconcilable but are also internally incoherent and, therefore, more open to translation across boundaries than one might think' (Blyth 2002: 295). Blyth also asserts that 'different theories generate different conclusions is itself the most valuable thing, since it is only through dialogue between contrasting perspectives that knowledge as a whole moves forward' (ibid: 292). It comes down to the researcher himself or herself and what kind of research questions they are interested in; how they address questions leads them to be aware of ontological and epistemological positions and the particular research methodology followed. Indeed, great thinkers like Max Weber took a flexible position on the philosophical divide between positivism and hermeneutics in social science (Bevir and Rhodes 2002: 149).

This thesis rests on documentary analysis and the analysis of secondary sources in the form of academic books and journals. The first reason for analysing official documents is that a number of official publications, from the Bank of England and the Federal Reserve to international organisations, such as the International Monetary Fund (IMF) and the Bank for International Settlement (BIS), are all available and accessible online. Open access to a great volume of official records enables the researcher to conduct research easily and effectively. Secondly, the huge volume of official records indicates 'not only the complete range of influences to which government was subjected at any given time but also what did not change' (Burham et al 2008: 200). Access to official records enables the researcher to 'gain greater empathy with the past and therefore make a decisive contribution to understanding change over time (ibid). More specifically, primary sources allow the researcher to understand the actual process of policy making. Looking into the process of monetary policy making through Federal Reserve archives, for example, provides clear signals about why a particular monetary policy was made in a historical event at a particular time because they consist of 'evidence that was actually part of or produced by the event in question' (ibid: 187). The analysis of documents and

historical archives provides an opportunity for the researcher to 'develop novel accounts and interpretations of significant events' (ibid: 208).

Regarding the historical development of the US dollar and the Federal Reserve as a global monetary authority, it is necessary to find out how policy makers made decisions during historical events as a way of understanding their perspectives and actions. The Federal Open Market Committee (FOMC) at the Federal Reserve contains a great volume of documents. The FOMC *Minutes* documents are selected because they provide the detailed process of how monetary policy making was executed during different events. The Federal Reserve documents in particular provide views that contrast with most economists' on the functioning of the Eurodollar market and the role of the US dollar in it, which is discussed in Chapter 4, Chapter 5, and Chapter 6. These documents are vital to understanding why and how Federal Reserve officers perceived the Eurodollar market differently. The Bank of England documents, such as the *Quarterly Bulletin* (available from 1960), are also particularly crucial to understanding how foreign central banks perceived the historical development of the US dollar in the Eurodollar market, which is discussed in Chapter 4 and Chapter 5. Additionally, this thesis includes official reports and papers from the Federal Reserve Bank of New York because, in one instance, they do not have the same opinions on historical events as the Board of Governors of the Federal Reserve. The diversity of official opinions enriches the researcher's understanding of historical events. In order to further complement official documentary analysis, this thesis includes IMF annual reports and BIS annual reports since their extended sources on different countries and financial markets improve understanding about the global context of each historical event.

In addition, secondary references, such as academic books and journals, are importantly used to complement the documentary analysis in order to not only consolidate and firmly contextualise knowledge on each case study but also compare and evaluate different interpretations. The empirical

chapters provide competing interpretations of the four historical cases, which are subject to examination. The combination of official documentary analysis and secondary sources provides a more adequate approach to conducting research on monetary phenomena. This balanced approach indeed provides a new understanding of the historical development of the US dollar and the Federal Reserve as a global monetary authority. As discussed above, a means of knowledge contribution is comparing the work of researchers, regardless of their ontological and epistemological positions. In this respect, the use of academic books and journals is crucial to the kind of critical engagement that enriches understanding of significant historical events as a whole.

7. Overview of the Thesis

This thesis consists of two main parts: a theoretical Part I (chapters 1 and 2) and an analytical Part II (chapters 3, 4, 5, and 6). Chapter 1 constructs a conceptual framework designed for the analysis of money and the development of the US dollar in subsequent empirical chapters. Chapter 2 reveals how three waves of IPE literature have inadequately theorised the rise of the US dollar as world money and identifies important historical events and episodes to be considered as part of the process of monetary transformation. Part II commences the analytical journey on the development of the US dollar as world money through four different case studies, which unfold in chronological order: the US dollar between 1944 and 1958 in Chapter 3; the US dollar in the 1960s, particularly in the Eurodollar market, in Chapter 4; the US dollar at the end of the Bretton Woods system in Chapter 5; and the US dollar during the Volcker Shock between 1979 and 1983 in Chapter 6. The organisational pattern of each empirical chapter begins with a summary of the argument and then engages with a review of IPE literature. Each chapter reveals what remains under theorised in IPE accounts. The main argument of each chapter provides an alternative interpretation of each historical case and draws out the specific monetary transformations that contributed to the overall process of the US dollar's rise. Through the conceptual

framework developed in Chapter 1, the three dimensions of money—as sovereign money of account, as the transferability of credit and debt relations, and as the constitutive role of the state—are used to explore and characterise the US dollar in each chapter.

PART I

THEORIES OF MONEY AND THE RISE OF THE DOLLAR

Chapter 1 Conceptual Framework: The Heterodox Tradition of Money

1.1 Introduction

The central argument of the thesis is that the rise of the US dollar as world money is a process of monetary transformation, not a spontaneous result emanating from US economic strength or the efficiency of US financial markets or new private institutional developments. The starting point for this opening chapter is the assertion that the widely accepted conception of money as medium of exchange cannot grapple with the dynamic character of modern credit money and thus provide an adequate conceptual basis for studying the dynamic process of dollar development. It follows that the conceptual point of departure for the analysis of money and the US dollar, offered by the thesis, needs to look well beyond the role of money as a medium of exchange. This should not be taken to mean that money does not function to facilitate commodity exchanges; of course it does. Rather, money as medium of exchange does not possess a conceptual quality which can reveal the constitutive role of the state in the development of modern money. Conceptualising money primarily as medium of exchange, indeed, leads to overlooking the crucial role of the state, and the central bank in particular, as a constitutive force in the monetary transformations that give rise to US dollar as world money. The essential characteristics of modern money are more than medium of exchange or an exchangeable commodity. The conventional reasoning of money in market exchange needs to be denied. In this regard, the process of developing the US dollar as world money should not be seen as a natural outcome of the dollar's monolithic role in facilitating international trade.

It is therefore vital to construct a new conceptual framework which enables to understand the dynamic process of dollar rise as a monetary transformation. For the characterisation of the US dollar as money

beyond the sphere of market exchanges, it is inevitable to reengage with the nature of money in a fundamental sense. The purpose of Chapter 1 is thus to build my conceptual framework for analysing money: what constitutes 'moneyness' in an essential sense. In this chapter, my review of the various economic and sociological theories of money will focus, in particular, on the heterodox tradition of monetary thought. This will lead to a framework that identifies and elaborates upon three essential features of moneyness: money as money of account, the transferability of credit and debt relations and the constitutive role of the state.

The first essential feature of moneyness is money of account. Money of account is an abstract measure of value which has been present from ancient political communities to modern states. The origins of money of account derive from measuring tax obligations or tributes to the political authority, not measuring the value of commodities in market exchanges, deeply rooted in the orthodox theory of money. A money of account is established by the state as a means of standardising and measuring the different forms of tax payments (Wray 1998). A money of account thus enables debts to be measured and the price list of commodities to be constructed (Keynes 1931). The fundamental feature of money as money of account is thus not the physical monetary forms which have changed in history. The state can determine a particular form of money, denominated in its declared money of account that its members use for tax payments (Knapp 2003 [1924]). The state, however, cannot control private uses of the particular monetary form for economic activities such as commodity exchanges or hoarding so that the economic functionality of money such as medium of exchange is subsequently developed (Wray 2012: 49). Money as money of account is also importantly differentiated from the Marxist conception of measure of value, deriving from measuring labour value, embodied into a commodity money in the sphere of market exchange. In other words, money of account cannot be said to arise from the process of market exchanges. The essence of money as money of account needs to be understood outside the sphere of market exchange. Money of account is created by the state; money

of account is sovereign. The value of money is originated from the state (Bell 2001). The relationship between money of account and commodity is not direct. The role of the state is foundational to the development of money of account.

The second essential feature of moneyness is that money is 'a social relation of credit and debt denominated in a money of account' (Ingham 2004a: 12). Money is a 'credit' for money users whereas money is a 'debt' for money issuers (Innes 2004 [1913]: 30). Money is produced as debt is incurred. The simultaneous monetary phenomenon of incurring credit and debt is characteristic of the transformation of ancient money to modern credit money. With the emergence of central banking in particular, certain private debts, issued by private banks, became monetised and integrated into the sovereign monetary space. That is, they were accepted as tax payments to the state. The acceptance of private bank debts as a general means of payment indicates that modern credit money, as a hybridised conception of private debt and state currency, became fully accepted and transferred to the modern society (Ingham 2004a). Since then, modern money has enabled the social relations of credit and debt to be widely transferable, meaning the transformation of the bilateral credit and debt relation to the multilateral debt-to-debt relation. The development of modern credit money as widely transferable credit and debt relations has been independent of 'the production and exchange of commodities' (Ingham 2004a: 12).

Lastly, the third essential feature of moneyness is the critical role played by the state in the making of modern credit money. Government debts, issued in a paper form for the purpose of financing wars, were able to become transferable through the operation of the Bank of England from the late seventeenth century. The transferability of the government debt gave rise to the centralisation of the English monetary system, increasingly based on the use of the Bank's notes, government debts, in the eighteenth century. In the centralising process of the English monetary system, private bank debts like

banknotes and bills of exchange were integrated into the English monetary system: they were accepted as a means of tax payments to the state. The dynamic character of modern credit money as the transferability of credit and debt relations was born as a hybrid money from the very outset. However, the transferability of credit and debt relations entails a pyramidal structure in which government debts are placed at the top, bank debts in the middle and non-bank and corporate debts at the bottom in a broad sense (Wray 2012: 85-7). Government and bank debts are regarded as modern credit money, whereas non-bank and corporate debts are considered not money but credit because non-bank debts are not used directly to pay government taxes. The maintenance of the distinction between money and credit is key to the management of modern monetary system. The responsibility for maintaining transferable credit and debt relations rests on the central bank as a monetary authority.

The section of 1.2 and 1. 3 critically engages with the orthodox commodity theory of money and the Marxist theory of money. The fundamental misunderstanding of measure of value is highlighted in two ways: the origin and nature of measure of value in both of these theories of money is misleading. It is impossible to think of the idea of accountability or measure of value, derived from market exchange. Section 1.4 moves on to assess the sociological theory of money. As this theory pays primary attention to the social and cultural meanings of money, the sociology of money retains a fundamental conception of money as neutral and derived from the sphere of exchange; that is, the sociological theory of money, like the commodity theory of money, is in general an apolitical understanding of money that rules out the constitutive role of the state. As such, it seems doubtful that the sociology of money can contribute to advancing understanding of the dynamic nature of modern money. The final section 1.5, by drawing from the heterodox tradition of monetary thought, identifies the three essential features of moneyness. In doing so, it utilises historical examples to elaborate upon each of the essential features and to show how the relationship between those features has developed. It attempts to provide a revisionist history of the evolution of modern money, clearly distinguished from

the commodity and sociological theories of money. The sub-section1.5.1 explains how money as money of account originates and clarifies the detailed meaning of money of account. The sub-section 1.5.2 makes an effort to contribute to the literature of the rise of modern credit money by paying attention to the role of the Bank of England in the context of the centralising English monetary system in the eighteenth century. The sub-section 1.5.3 makes various links between money and the state, in particular, the role of the central bank.

1.2 The Orthodox Theory of Money

The orthodox economic idea of money as a commodity, essentially a medium of exchange, can be traced back to Aristotle in classic Greece. He argued that 'money was invented to be used in exchange' (*Politics* I: 1258, quoted in Meikle 2000: 164). A commodity was spontaneously transformed to a medium of exchange in order to make easier the inconvenient transaction of C-C without money, developing into C-M-C and M-C-M or M-M[1] (Meikle 2000: 157-8). The key essence of money, for Aristotle, rests on medium of exchange (Gordon 1961: 610). It implies that further qualities of money as measure of value and store of value are derived from the medium of exchange (Schumpeter 1994 [1954]: 62). Aristotle's theory of money thus provides two important positions in the commodity theory of money; the fundamental function of money is to 'serve as a medium of exchange, and in order to serve as a medium of exchange, in the markets of commodities, money itself must be one of those commodities' (Schumpeter 1994 [1954]: 63). His theory of money 'prevailed substantially to the

[1] M stands for money and C stands for commodity. C-C refers to bilateral commodity exchange without money. C-M-C refers to the exchange of commodities through the use of money as medium of exchange. M-C-M refers to the transactional exchange to make money for buying and selling goods. M-M refers to money lending at interest (Meikle 2000: 157-8).

end of the nineteenth century and even beyond. It is the basis of the bulk of all analytical work in the field of money' (ibid).

Orthodox economics has continued to identify the origin and essence of money as medium of exchange in the sphere of exchange, in particular, facilitating or expanding trade. Money as a commodity originates from barter exchange in order to overcome a 'double coincidence of wants' (Jevons 1875, quoted in Kiyotaki and Wright 1989: 928). Karl Menger (1892) agrees with the origin of money as medium of exchange, but raises why certain commodities were transformed to the medium of exchange; more specifically, why economic individuals, in the absence of the double coincidence of wants, accept a certain kind of commodity, even if he or she no longer needs it. The answer to the question was that individuals exchange their goods for certain goods highly saleable or exchangeable to market (Menger 1892: 248). Simply put, rational economic individuals use the highly saleable and tradable commodity to reduce their transaction costs, transforming the most tradable commodity to money as the generally accepted medium of exchange. 'When a commodity is accepted in trade not to be consumed or used in production, but to be used to facilitate further trade, it becomes a medium of exchange and is called commodity money' (Kiyotaki and Wright 1989: 929). '*This medium of exchange function is the essential function of money'* (ibid: 928, note 1, emphasis added).

Menger's commodity theory of money, however, fundamentally depends on his assumption that different commodities have different degrees of intrinsic 'saleableness' or exchangeability *before* market exchange begins (Klein and Selgin 2000: 218). The reason for intrinsic saleableness of certain goods previously possessed is not answered. Interestingly enough but devastating to the commodity theory of money, Menger raised a crucial question: why individuals exchange their goods for useless or worthless forms of money like little metal disks or documents (Menger 1892: 239). He left the question unanswered and instead engaged with the first question –the acceptance of certain

commodities, not needed for rational individuals, as the medium of exchange- raised above. Afterwards, neoclassical economists have tried to answer the devastating question by the argument that rational individuals prefer to hold worthless forms of money in order to reduce transaction costs. Kevin Dowd (2000), for example, explained that the evolutionary process of commodity exchanges led to the emergence of a numeraire commodity, gold, as a general medium of exchange and unit of account; the replacement of gold by worthless paper money like banknotes was explained by rational individuals to reduce 'considerable costs, particularly those of storing, protecting and moving coins around' (Dowd 2000: 144). The transition from gold coins to paper money does not involve the complexity of historical detail, but a convenient expression of 'the logical circularity of neoclassical economics' methodological individualism' (Ingham 2004a: 23). Money is seen as a neutral concept in market exchange processes and, monetary order, therefore, is 'the unintended consequence of the rational actions of individuals' (Hayek, cited in Dodd 1994: 36).[2]

1.3 The Marx(ist) Theory of Money

Unlike the orthodox economic theory which prioritises money as medium of exchange, Marx regards the fundamental essence of money as measure of value. '[M]oney serves as a *universal measure of value.* And only by virtue of this function does gold, the equivalent commodity *par excellence,* become money' (Marx 1951: 97, emphasis original). For Marx, the measure of value needs to be *embodied* into a particular form of commodity money which can measure the objectification of labour value,

[2] Money as neutral medium of exchange or exchangeable commodity is maintained by the assumption that money is clearly distinguished from credit without explaining how money is related to credit, as the same way why worthless monetary forms are accepted to rational individuals. It is now the large role of credit, rather than money, which finances the real economy. However, '[c]redit could not easily be accommodated in the concept of the 'real' economy as a structure of exchange ratios (object-object relations) based on the preferences of individual utility maximizers (agent-object relations). The creation of money by the creation of the *social relation* of debt (agent-agent relations) was utterly incompatible with the methodology of orthodox neoclassical economics' (Ingham 2004a: 22 emphasis original).

contained in other commodities directly (Moseley 2005: 2). In short, money needs to be a commodity, and at the same time, the commodity money is the measure of value for other commodities in direct relationship in order for commodity exchange to occur. Thus, Marx's commodity theory of money is inescapable from his labour theory of value; the measure of value, integrated into the commodity money, must be a product of human labour (Germer 2005: 24-7). 'It is understood that the commodity [gold] is the origin of money' (Marx 1971: 64). Marx's 'preoccupation with the labour theory of value and commodity-money prevented a clear understanding of capitalist credit-money' (Culter et al 1978: 24-6). The relationship between commodity money and labour value, 'at odds with everyday experience already in Marx's times, appears to be obsolete nowadays' (Gansmann 1988: 308).

Following Marx's analysis, Rudolf Hilferding explains the necessity of money precisely from the labour theory of money (1981 [1910]: chapter 1). Labour value embodied in commodities enables them to be commensurable so that the emergence of a commodity money is a natural process in market exchanges. 'Money thus originates spontaneously in the exchange process and requires no other precondition' (Hilferding 1981 [1910]: 36). His anachronistic theory of money is clear when explaining the value of paper money as 'the value of the circulating commodities' (ibid: 56). In other words, the value of money shifts from labour value to purchasing power; no explanation for why worthless paper money is accepted. Schumpeter regards his work as 'little progress in theoretical understanding' (1994 [1954]: 881). Others have attempted to explain the emergence of money not as the direct measure of labour value, but as the 'form' of value, but still grounded in the sphere of commodity exchange. Fine and Lapavitsas, for example, regard money as a commodity which is initially valued by labour, and then this commodity possesses the 'simple, isolated or accidental form of value' (2000: 365), exchangeability for other commodities. The exchangeability of the commodity becomes 'moneyness' (Lapavitsas 2005a: 96; 2005b: 392). Lapavitsas goes on to claim that 'a frequently traded commodity eventually monopolizes the ability to buy and consequently becomes a universal equivalent' (2005b:

393). They attempt to save Marx's theory of money from his essential treatment of money as measure of labour value, but turn to the value of exchangeability in the process of market exchange. This is extremely similar to Menger' idea of saleableness above.

The dilemma Marx's followers face is that keeping Marx's original quality of money as measure of value is forced to deal with his labour theory of value since labour is regarded as substance of value, embodied into commodities. Eluding the measure of (labour) value tends to be towards exchangeable commodity, extremely similar to the analytical structure of orthodox economics. Others like Fred Mosely abandons Marx's commodity money but keeps his measure of value, embodied in paper money which no longer contains labour value (Moseley 2005: 15). He thinks that paper money as a new measure of value is established because commodity owners had to accept paper money as universal equivalent due to the suspension of the convertibility between commodity and paper money in the second half of the twentieth century (ibid: 14). His assumption that paper money is a new measure of value is mistaken since the exchange ratio between money (paper money for Moseley) and gold before their suspension had been expressed as the measure of value like the dollar, pound and yen for example. It is a fundamental misunderstanding that a form of money itself is the measure of value or the universal equivalent of other commodities in the commodity theory of money in both orthodox and Marxian economics. This is what Geoffrey Ingham calls a category error (2004a). The measure of value is not necessarily integrated into any form of money, but it is rather arbitrarily designed by the political authority, and it is abstracted in monetary units. It is extremely implausible that one particular commodity as a single unit of account can produce stable and multiple exchange ratios of commodities in exchange processes since a small change in the value of the single unit commodity can create extreme complexity to the settlement of exchange ratios. Thus, the idea of money of account does not derive fundamentally from the process of market exchange.

1.4 The Sociological Theory of Money

Simmel's *The Philosophy of Money* sought to understand what money reveals about modern metropolitan life (Dodd 1994: 175). A number of sociologists tend to grapple with the *social and cultural effects* of money in modern society. Simmel, however, touches on essential features of money by engaging in orthodox and Marxian theories of money. He denies the commodity theory of money which places the value of money in its production costs, markets and labour time (Simmel 1978: chapter 2). He thinks that the value of money stems from its exchangeability; 'money itself acquires a value by which it not only establishes a relationship to all kinds of concrete values, but can also indicate relations among value quantities within its own domain which excludes tangible objects' (Simmel 1978: 121). Money's exchangeability with other goods is the most distinguished feature (Dodd 1994: 42). In this sense, the value of money, for Simmel, deriving from its exchangeability, is very similar to the nineteenth century orthodox economic thinking, as discussed above.

The link between money and the value of money as exchangeability, however, seems contradictory in his logical consistency. The possession of money's exchangeability derives from money's constant medium function, giving rise to a 'constant standard' and an 'abstract intermediary' (Dodd 1994: 42). The medium function of money can be realized *only* when money stays in market exchange because 'money is nothing' in itself (Simmel 1978: 130) *before* entering into the relation between goods. The *nothing* of money contradicts his statement that 'money can have developed *only* out of previous existing values (Simmel 1978: 119, emphasis added).

Simmel's identification of money as a *neutral* concept, grounded in market exchange, has influenced sociologists subsequently. Parsons regards money as a 'symbolic medium of exchange' by integrating different parts of the social system; indeed, money has no 'value in use' but only in 'exchange' (Parsons 1967: 306, cited in Gansmann 1988: 290; Dodd 1994: 60). Habermas also considers money to be a

'symbolic rationality' because the information it conveys has built-in rational codes among its users in the life-world (Gansmann 1988: 249; Dodd 1994: 70). For both Parsons and Habermas, money is represented as a 'neutral symbol'; thus, money is *neutral* and *harmless*, 'as far as it does not affect the underlying constitution of either the 'real' economy or the social system' (Ingham 2004a: 60). This *neutral* idea of money seems inevitable, for they accept, as in orthodox economic theories of money, that the value of money is realized *only* in exchange. As Ingham (2004a) notes, this general approach to money has persisted in sociology. It is surprising that Parsons regards money as a neutral symbol from his reading of Max Weber, who points out that 'money can *never* be merely a harmless unit of accounting or of calculation so long as it *is* money' (Weber 1947: 178, emphasis original). It seems doubtful that sociologists' disinterest in the general theory of money would contribute to a progressive or updated understanding of money.

Zelizer (1994) and Dodd (1994; 2004) does not have reason to theorise money in general because they think the nature of money is heterogeneous; money has taken various *forms* throughout history (Dodd 2004: 15 emphasis added). In her book (1994), *The Social Meaning of Money*, Zelizer understands money as how money is used in various social contexts. Leyson and Thrift (1997) followed her multiple meanings of money, used in different social circumstances. Various social settings provide four different types of money's social meanings; domestic, gift, institutional and sacred monies (Zelizer 1988: 631, cited in Fine and Lapavitsas 2000: 361). Nevertheless, her heterogeneous concept of money derives from a lack of clear definition of the market; 'the market is perceived to be present whenever something vaguely resembling a sale or purchase (or even gift, as of money) is involved' (Fine and Lapavitsas 2000: 361). Her argument that 'there is no single, uniform, generalized money, but multiple monies; people earmark different currencies for money' (Zelizer 1994: 18-19) is exaggerated because various monies can exist only if there is a common characteristic of money in the first place (Ingham 2001: 313).

Nigel Dodd (1994) attempts to problematize the generality of money because the distinction between limited purposes of ancient money and general purposes of modern money is inappropriate, and because no single *form* of modern money can serve general purpose. Given his emphasis on various forms of money, he developed the concept of monetary networks which can integrate all different forms of money in his conceptual network. However, in his recent book (2014), *The Social Life of Money,* the analytical concept of monetary networks disappears, and he makes efforts to embrace various interpretations of how money comes into being and of how money can be understood in the modern society in order to avoid contemporary debates on what defines money. Thus, he does not conceptualise what money is in an explicit sense, but, starting with '[g]iven the myriad forms that money has taken through history' (Dodd 2014: 15), he keeps the idea of money in *form* throughout the book, indicating that he does not have a conception of money of account in his understanding of money.

The difficulty for Dodd arises when engaging with the heterodox school of monetary thought. He points out that money in this school emerged as a 'form' of debt to the political authority (Dodd 2014: 23). From then, he regards money as a form of debt in the heterodox school. Even though he correctly relates debt obligation to the state as a means of payment (ibid), the notion of money as a form of debt is misleading. Money as a form of debt is not what the heterodox school argues about the origins of money but what comes from the debt relation; the fulfilment of debt obligation as part of building the political community requires the idea of accountability, measure of value. Without a conception of money of account, his engagement with the various aspect of money such as culture and territory is not successful. For example, he is confused to identify differential *money uses* in social relationships as how culture shapes *money*: the nature of change is not money itself but only the *use* of money, structured in different social relations (ibid: 290).

It is surprising that unlike Marx's followers who attempt to abandon either Marx's labour theory of value or Marx's commodity theory of money in the force of dominant modern credit money, as discussed above, Dodd regards Marx's theory of money as 'relevant now as it was in his time' (2014: 50). Indeed, many people think that Marx's theory of money is anachronistic (Cutler et al 1978: 24-6; Gansmann 1988: 308). Marx's misleading commodity theory of money is repeated in Rudolf Hilferding's *Finance Capital* (chapter 1) that Dodd surprisingly regards as 'progressive and productive' (2014: 59-63). His misleading observation of money continues throughout the book. He conceptualises state money as territorial money in form. 'Notes and coins bearing national symbols now constitutes a tiny fraction – less than 10 percent – of the total flow of money around the global economy' (ibid: 213). He goes on to discredit the heterodox monetary thought by embracing what Susan Strange said at face value: 'the world's financial flows were now being constituted by *privately issued money* that had little to do with states' (Dodd 2014: 220, emphasis original). What are the national symbols exactly? It is clear that he does not have a conception of the sovereign money of account in his mind or he does not understand it appropriately. His observation without the conception of the national money of account leads to misconceiving the 'deterritorisation' of state money and the 'increasing process' of heterogeneous monies (ibid: 226-251).

In sum, the orthodox economic theory of money is apolitical in that money is assumed to originate and develop spontaneously in the sphere of market exchange. Medium of exchange is the key function, other qualities of money are believed to derive from the function, and medium of exchange confers different forms of money throughout history. Money is eventually assumed to be as a neutral concept. In this tradition, a number of sociologists take for granted the neutral 'symbol' of money uncritically from the orthodox analysis of money by paying primary attention to the cultural and social meanings of money, transacted in different social contexts. They have uprooted the crucial role of the state from *describing* the cultural meanings of money. Marx and his followers differentiate themselves from the

orthodox idea by prioritising the key quality of money not as medium of exchange but as measure of value, expressed in a commodity form. However, the link between money and commodity cannot be escapable from Marx's labour theory of value. The analysis of Marx's followers who downplay labour value is very similar to the orthodox economic analysis in market exchange. There is, as Ingham notes (2004a), a fundamental misunderstanding of measure of value in the theory of money since the characteristic of money is believed to develop from market exchange. In other words, the quality of measure of value needs to be understood seriously outside market exchange. More importantly, the sociological theory of money does not trace back to explain why and how the dynamic nature of modern credit money comes out historically. The heterodox tradition of monetary thought attempts to provide an explanation for the origins of money outside market and for the historical transformation of money.

1.5 The Heterodox Tradition of Monetary Thought

The heterodox tradition of monetary thought can be considered a combination of the credit theory of money (Innes 1913, 1914) and the state theory of money (Knapp 1924). Against the theory of money as a commodity, Mitchell Innes argues that the monetary unit, the money of account, is in nature distinct from metal coins. The essential nature of money as money of account is emphasised (1913: 16-26; 1914: 63). Only in the modern time of the gold standard, there was 'any fixed relationship between the monetary unit and any metal; that, in fact, there never was such a thing as a metallic standard of value' (Innes 1913: 16). Second, all forms of money is credit, or 'claim', 'promise' to pay, in the sense that they consist of the ability to redeem a debt. '[C]redit is simply the correlative of debt. What A owes to B is A's debt to B's credit on A' (ibid: 30). Money is produced as debt is incurred. Thus, debt cannot be measured by 'the standard of tangible thing' (ibid: 57). It can be measured by monetary units like the dollar as a measure of value, which 'is not itself a commodity, nor can it be embodied in

any commodity. It is intangible, immaterial, abstract. It is a measure in terms of credit and debt' (Innes 1914: 63).

Knapp (1924) in his book, *The State Theory of Money,* asserts that money cannot be created without the state because the state determines the money form of final means of payment, tax payments (38). The essential attribute of money is not a medium of exchange, but unit of value or a means for accounting for and settling debts (7-8). Therefore, the state creates money by accepting what discharges state debts. The state theory of money is not about the state as the *only* issuer of money rather private credits can become fully accepted to society and become money *only if* they are denominated in the state's money of account and accepted as a direct means of tax payments. The implication of the state theory of money discredits the assumption in orthodox economics and many others following the former unwittingly that value of money can be only established in market exchange.

The state theory of money had influenced Keynes (1931) and Weber (1947). They both recognised the crucial role of the state on money. Keynes paid attention to a distinction between money of account and money forms, and Weber thought that the state established the formal validity of money. Influenced by Knapp and Keynes, neo-chartalists (Wray 1998; Goodhart 1998; Bell 2001) recognise the inevitable link between money and the state. Ingham in his book (2004a), *The Nature of Money,* eventually achieved the sophisticated combination of the two theories by focus on the historical development of modern credit money. My reading of the heterodox tradition of monetary thought leads to identifying three defining features of moneyness as money of account, the transferability of credit and debt relations and the constitutive role of the state.

The fundamental essence of money is money of account, established by the state so that the link between the key quality of money and state is foundational. The emergence of central banking in the

late seventeenth century created a distinctive characteristic of modern credit money which hybridised private credits and state currency. Thus, certain private credits, fully integrated in the fiscal system of the state, have been generally accepted and widely transferable. The second feature of modern credit money as transferability of credit and debt relations is linked to the operation of central bank as a bank to the state and modern money creation. The dynamic nature of modern credit money was born, and monetary creation is shared between state and banks. The following sections explore the origins and development of money by use of history to pinpoint the three essential characteristics of money.

1.5.1 *Money as Money of Account*

The origins of money as money of account in non-market society

In the heterodox school of monetary thought, money does not originate from measuring the value of commodities in market exchange. Rather, money emerges from the process of measuring debts in non-market ancient societies, even though scholars conceptualise debts differently (Wray 1998, Ingham 2001, 2004a; Agleitta 2002; Graeber 2012). What is commonly shared is that the process of measuring debts characterised a fundamental feature of money as money of account, measure of value, which makes possible for pricing of commodities and debt contracts. In fact, for those who tend to trace the origin of money of account to social rules governing *wergeld,* the practice of payments for compensating injuries on values of the pre-market society (Grierson 1977: 28; Ingham 1996: 519), this internal practice of making social payments may produce 'the notion of debt and measurement of indebtedness', but it is not plausible to produce measurements of specific debts on the individuals (Wray 1998: 49). It seems likely that the *wergeld* would be a stepping stage for the development of a generalised unit of account. Rather, the money of account seems likely to originate as 'a means of standardising tribute or taxes levied by rulers' (Wray 1998: 50). A universal 'debt' or tax obligation, imposed by and payable to the central authority may transform the debt measurement of the *wergeld*

into a generalised money of account which produces equivalences among goods in the ancient empires (Wray 2004: 228).

In the Egyptian tribal society where there was no market exchange, the collective production of social goods, no political authority, and no obligation between individuals (Henry 2004: 83). Agricultural success, based on hydraulic operation, led some (engineers) to have exclusive knowledge about the hydraulic system, and the engineers became eventually separated socially from their tribal members as further expansion of the agricultural economy depended on their exclusive knowledge Inequality between them and their members was growing and a stratified society was forming (Henry 2004: 86). The growing class society would need to organise new obligations. Tribal obligations were converted into taxes based on not the individual but the village (ibid: 90). Authorities - kings and priests - redistributed a certain portion of the economic surplus collected through taxes, and the rest of the economic surplus was shared among the various sections of the state bureaucracy (ibid: 91). 'The growing difficulty of managing the political and economic arrangements required the introduction of a unit of account in which taxes and their payments could be reckoned' (Ibid: 92). The political, administrative and economic life of the ancient empires were centralised on their palaces and temples (Davies 2002: 50; Hudson 2004).

The emergence of a unit of account requires the transition from egalitarian society to stratified society in Mesopotamian and Egyptian empires (c.3000 to 500 BC) (Henry 2004: 81-94). The money of account was the *deben, '*a unit of weight equal to 92 grams of wheat which was later replaced by copper' (Henry 2004: 92). The money of account had nothing to do with any object, but it was an arbitrary unit of account, imposed by the state, which was used to establish administrative price lists and to measure tax debts (ibid). However, payments were made in goods. The disunity between money of account and means of payment was common in the ancient empires (Grierson 1977) and medieval times (Einaudi

1953; Ingham 2004). Similarly, the emergence of Mesopotamian empire introduced a money of account, clay tokens which were 'marked with a specific meaning' (Henry 2004: 93). The token which were used to represent goods 'involved a conceptual leap in which each token was endowed with a specific meaning that could be understood independently of the context to which it originally referred' (ibid). The features of the tokens were recognised as sophisticated craft work, writing and reading skills (ibid: 94).

Indeed, writing was invented in Mesopotamia in order to 'keep track of economic transactions' (Davies 2002: 50). Writing, number and money may be closely linked in the operation of ancient empires' palaces (Wray 1988: 50). The Mesopotamian money of account, representing goods, was based on 'the value equivalence of the shekel weight of silver (240 barley grains or 8g) and the monthly consumption unit of a gur of barley' (Ingham 2004: 94). This equivalence was established by the state which 'defined what weight and fineness of silver would satisfy debt payments in shekels of silver' (Keynes 1931: 12-3). Unlike the Egyptian money of account, the Mesopotamian money of account was linked to precious metals; the link between precious metals and goods were established. The integration between precious metals and goods was fully materialized in ancient Greece and late Rome (Davies 2002). Pure gold coins were introduced to Greece as a symbol of high social status and store of value, not as media of exchange (Ingham 2004a: 94). Furthermore, motivations which drove Greeks into coinage was not commercial or economic considerations (Davies 2002: 60).

The meaning of money of account

It should be emphasised that money of account has no direct relation to any specific object or thing like metal. Money of account is arbitrarily designed by the state. According to Ingham (2006: 267), 'money of account was an abstractly established constant equivalence; that is to say, the issue is not one of the quantities of commodities, but their authoritatively declared relationship'. Money of

account allows debts to be measured and provides constant equivalences among the value of commodities. Therefore, the essential feature of moneyness is assigned by money of account not by money forms or things (Keynes 1931). As Wray (2012: 49) points out, money seems to have derived its further characters from the operation of money of account. Forms of money, shared in the state's money of account, are generally accepted to society. The general acceptability of the monetary form means to possess its capacity to have a claim on all goods and services socially produced. Therefore, money possesses abstract purchasing power, what it can buy in society. Later on with the emergence of the central bank, some of bank credits such as bank notes and checking deposits were converted into the possession of the abstract quality (Keynes 1931: 6; Schumpeter 1954: 321). In other words, the fusion of private credits and state money has been particularly characterised in such states as Britain and the United States (Keynes 1931).

The sovereign money of account is generally maintained by the state. The specific role of the state is to possess the power or legitimate capacity to tax. In other words, state's taxation fundamentally supports the money of account. In African tribal or subsist societies in which money as sovereign money of account and monetary taxes did not exist, the monetisation of the African societies was established by European colonialists who imposed monetary taxation on African people in order to supply labour, goods and services to the colonial authorities (Wray 1998: 58-61) In other words, colonialists' power to tax and to define the monetary form in which tax debts were discharged gave impetus to the monetisation of the societies. In the process of monetary taxation, money of account was introduced by the colonial powers. Therefore, with other roles of the state such as the use of force, taxation is a vital means to maintain the essence of money of account. Furthermore, the history of modern European states shows a close relationship among war, taxation and public finance (Braun 1975:309). Indeed, fiscal needs for financing war caused the creation of modern European states (Schumpeter 1954: 106). Therefore, a fiscal aspect of the state is crucial to understand the power of

the state. Hobson (1997) argued that state power or capacity can be improved by cooperation with society: that is to say, maximising fiscal capacity through taxation of social consensus, in particular a dominant class, can enhance state power or capacity domestically and externally. Therefore, states with effective and legitimate taxation can maintain their stable moneys of account.

Money of account and monetary space

The transactional space of money and commodities is defined by money of account since money of account provides a means to debt contracts and the pricing of commodities. The transactional space is called 'monetary space' which does not have to be a physical or geographical space, but rather is 'the site, or field, of potential transactions' (Ingham 2004: 71). In most modern states, there has been two distinctive patterns of expanding sovereign monetary space. As Keynes (1931) and Schumpeter (1954) noted that some bank credits changed their character and acted like state money, there has been the process of hybridising private bank credits and state money, creating a hybridised concept of state money which should be distinguished from the conception of 'fiat' money, issued directly by the state. In other words, the fusion of private and public monies expands sovereign monetary space in which social monetary interactions are expanded and impersonalised. This monetary process can be seen as the consolidation of sovereign monetary space, rather than 'territorialisation' of money in the context of state building (Gilbert and Helleiner 1999; Helleiner 2003). 'Monetary territorialisation' does not fully grapple with the historical process of the monetary fusion between private credits and public money since they tend to focus on geographical specificities of money forms in the context of state building and would then be led to focus on 'deterritorialisation' of money (Cohen 2001; Dodd 2014, chapter 6) and 'dematerialisation' or 'denationalisation' of money (Gilbert and Helleiner 1999). The focus on changing forms of money can lead to a fundamental misunderstanding of the nature of money. Indeed, 'territorialisation' of money contributes to the consolidation of sovereign monetary

space by eliminating foreign money (Helleiner 2003).

The other pattern of sovereign monetary expansion is characterized by the creation of private credits and inventions of private or local means of payment. The former tends to be integrated into sovereign monetary space, where the latter's networks remain local or limited, not fully integrated into sovereign monetary space. So-called 'electronic money', electronic forms of money, attracts a lot of attention from political, economic and cultural discipline (Cohen 2001; Dodd 2005). However, the focus on new forms of money is to follow the assumption of orthodox economic theory of money that the primary function of money is medium of exchange. The tendency to understand money as medium of exchange is to overlook the essence of money as money of account. So-called local exchange trading schemes, LETS, which first appeared in Canada about 30 years ago, still remain *local*. Then, what we need to pay attention to is the creation of private bank credits and the process of integrating them into sovereign monetary space. The creation of private bank credits will be discussed later on in money production. The consolidation of sovereign monetary space does not necessarily eliminate private or local means of payment. The expansion of sovereign monetary space has been particularly characterised by the interaction between bank credit creation, the state and the central bank. The more expanded monetary space, the more dependent the economy on the central bank (Aglietta 2002: 53).

Money of account and means of payment

The identification with the key quality of money as money of account does not necessarily mean that money has only functioned as money of account. In addition to money of account, means of payment can be applied to what constitutes money possibly. However, what is important to notice is that means of payment do not have the conceptual basis which can distinguish money and 'money things' which appear to be money. For example, Tesco coupons in England or cigarette traded for other goods in prison can be functioned as means of payment but in limited networks or space. The heterodox school

argues that the important aspect of money (different forms of money, denominated in sovereign money of account) is not means of payment but *final* means of payment, widely accepted to purchase all goods, services and financial debts and therefore able to pay state taxes directly. 'Things', functioning as means of payment without possessing money of account, are not accepted widely and limited to buy goods; their function as money remains limited. Ellis (1934) emphasised that the essence of money is not about how *many functions* it possesses but how *few* it must function.

Depending on historical contexts, money of account and different means of payment coexisted in ancient Mesopotamia (Henry 2004) but later on, money of account and means of payment were integrated in the coinage of Greek and Roman periods (Davies 2002; Ingham 2004). In post-Roman Europe, Charlemagne (768-814) imposed a money of account, derived from the Roman system, - pounds, shillings and pence in the ratios 20: 12: 240, which did not correspond to any circulating coins (Einaudi 1953: 230). Therefore, Roman money of account was delinked from coins' means of payment. Roman money of account was not issued, but only silver shillings (ibid). The distance between Roman money of account and metal means of payment made people understand money as 'dematerialised' or 'imaginary' money. As people continued to count and price goods in terms of Roman money of account, the 'imaginary' money was believed to be invariant in spite of debasement, wearing, and clipping of the circulating coins (Einaudi 1953: 230-235).

In sum, the fundamental characteristic of money is money of account established by the state. It is abstracted in monetary units. It allows debts to be measured and the price of commodities to be constructed. It does not directly measure the value of commodities as assumed to be contained in a particular commodity. It enables debt contracts to be transferable and commodities to be priced. In other words, money of account is categorically distinguished from physical forms of money. Money of account is maintained by the taxation of the state. Therefore, state with legitimate and effective

taxation can be able to maintain stable money of account. In a sense of modern state, money of account means sovereign money of account which defines sovereign monetary space in which taxes are attached in every economic transaction by use of different forms of money denominated in the sovereign money of account. In relating to the rise of the US dollar in subsequent chapters. The monetary role of the US dollar as an international abstract measure of value is importantly placed not in international trade of US goods but in the settlement mechanism of inter-European government debts in the 1950s (Chapter 3).

1.5.2 *Creation of Modern Hybrid Credit Money*

One important characteristic of money should be stressed out here as a crucial distinction, in which the sociological theory of money is not interested, between ancient money and modern credit money. Ancient banks, which existed in 'the ancient world before and during periods of coinage in classic Greece and Rome' (Davies 1994, cited in Ingham 1999:85), are not capitalist because the activities of the pre-capitalist banks were restricted to intermediary roles: exchanging money in circulation of foreign and domestic coins and 'making payments at a distance' (Ingham 1999: 86). According to Max Weber (2003 [1927]),

> 'in the pre-capitalistic age, the banks transacted a deposit business with transfer or assignment of credits for the elimination of cash payments. The arrangement presupposed that the depositor-customer permanently maintained a deposit in the bank in question; correspondingly we find banks "notes" even in Babylon. Yet one must not think in this connection of bank notes in our sense, for the modern bank note circulates independently of any deposit by a particular individual. (254-255).

In other words, there was no capitalist banking system that could create private credit money beyond bank deposits and transfer to third parties in the ancient times. Weber criticised 'Simmel for failing to distinguish between a money economy and capitalism. It is a criticism that remains apposite to

contemporary accounts of the sociology of money' (Bryan and Rafferty 2007: 143). Similar to Weber, Schumpeter (1994 [1954]: 1113) argued that the distinctive characteristic of capitalist banking system rests on the creation of new credit money by the process of bank lending. Geoffrey Ingham (2004a) makes a decisive contribution to the emergence of capitalist credit money by arguing that private debts such as bills of exchange were integrated to the sovereign monetary space in the late seventeenth century of England so that modern credit money unlike ancient money enables to transfer the social relation of credit and debt in the sovereign monetary space.

Omitting the historical transformation of modern money, many sociologists and their followers tend to think of modern money as state 'fiat' money *only* in the context of national building of the nineteenth century. Since the emergence of the nation-state is historically contingent, the link between money and *the nation-state* is not definitive (Dodd 1994; Gilbert 2005). Their understanding of the link between money and state stems primarily from Dodd's misinterpreting George Knapp that 'money is a creature of law and depends on legal ordinances for its validity' (Dodd 1994: 27). Dodd's reading of George Knapp misleads to identifying the state theory of money with the claim that it regards money as 'fiat' money, issued by state. This narrow interpretation is exactly what Knapp was concerned about. 'We must not make our definition too narrow. The criterion cannot be that the money is issued by the State, for that would exclude kinds of money which are of the highest importance; I refer to bank-notes: they are not issued by the State, but they form a part of its monetary system' (Knapp 2003 [1924]: 95). Dodd reduces the link between money and state (nation state for him) to the creation of money simply by the legal enforcement of the state. This overlooks the constitutive role of the state in creating money as money of account, discussed in the previous section *and* in creating modern credit money as will be discussed below. Indeed, what Knapp claims is not legal tender law but the decision of the state to accept in public pay offices, which validate money (Knapp 2003 [1924]). The process of validating money cannot be reduced simply to law enforcement

as the success of England's production of modern credit money is historically distinguished from the failure of the one of France in the eighteenth century. This section attempts to provide a brief explanation of how modern credit money, as a hybridisation of integrating private debts into the sovereign monetary space, emerges through the operation of the Bank of England. It engages in the current debate on whether the general transferability of paper money is established by private banks or the state in the seventeenth and eighteenth centuries of England.

The emergence of the early public banks and new bank credits

In the fifteenth century, the early public banks were formed as mutual alliance between state and banks in the Mediterranean city states; they established 'the early monopolistic public banks of deposit as a measure of protection for the critically important function in war finance' (Ingham 2004b: 194-5); for example, *Casa di San Giorgio* at Genoa in 1407 and *Banco di Riato* at Venice in 1587 (Fratianni 2009: 257-60). The Genoese bank was a public bank, managing the shares of *San Giorgio,* called *luoghi,* and 'handled deposits, specie transactions, loans and interest payment on *luoghi*' (ibid: 259). The public bank could provide loans to the state and private customers by running overdrafts (Assini 1995: 270, cited in Fratianni 2009: 260). The *Banco di Riato* lent loans to the government in exchange that its deposit liabilities were treated as legal means of payment (Day 1987: 153). Unlike the conflict of monetary interests between the sovereign and private bankers in continental Europe (Knafo 2013), the close linkage between them allowed public banks to create new money. However, the close alliance between the sovereign and private banks was based on '*intra*-class relations in the governing plutocracies of the Italian city states' (Ingham 2004b: 195, emphasis original). The intra-class relation generated frequent factional rivalry and political instability which eventually contributed to the demise of the city states (ibid: 202)

In the sixteenth century of western Europe, there were various forms of private money available such

as bills of exchange and promissory notes later on, and they were used 'in commerce, and existed alongside the plethora of diverse coinages of the states and principalities' (Ingham 2004b: 196). The bill of exchange, introduced in the thirteenth century by Islamic traders (Aglietta 2002; Ingham 2004a), were neither 'simple *credit* in the sense of *deferred payment'* nor '*direct* representation of precious metal' (Ingham 2001: 305). Rather, they as 'promises to pay' acted as means of payment (Ingham 1999, 2001). They were new kinds of private money which was distinguished from the interpersonal networks of ancient monies (Aglietta 2002; Gardiner 2004). Whereas ancient banks could not issue notes beyond the deposits of their customers and their activities were restricted to intermediary roles such as exchanging money and making distance payments (Weber 2003: 254-255; Keynes 1930; Schumpeter 1954). The early modern bankers were able to benefit from the use of bills through '*the conversion of one money of account to another'* (Aglietta 2002:46). The exchange bankers took advantage of arbitrage opportunities in the passage of bills, expanding the scope of trade 'without any increase in the volume of velocity of coins in the different countries' (Ingham 2004b: 199)

The development of private credits in England

The stability of English money provided a foundational base toward the path to the creation of modern money. Unlike European continental experiences of unstable moneys of account, England experienced the historical uniqueness of its remarkable monetary stability from the late 16th century to 1920 – four ounces of sterling silver as an English money of account – (Braudel 1985: 356). The fixed value of the money of account, though challenged in 1621, 1695, 1774, and 1797, provided the foundation for private credit production, loans lent to the state, credibility in debt contracts (ibid: 356-7). The English stable money ultimately offered a monetary base for revolutionalising the English financial market in the 18th century (Dickson 1967; Carruthers 1996). The English monetary mystery was based on balance of power among Crown, Parliament and creditors against absolutist Crowns (Ingham 2004a: 123).

Contrary to European arbitrary powers on money, English sovereigns were checked by the emergence of Parliament in the 14th century, which particularly protected silver coins (Knafo 2013: 66-7). Suffering, however, from monetary chaos from 'Great Debasement', manipulated by Henry V III, in the 1560s, Queen Elizabeth made serious efforts to replaced old coins with new coins without devaluation (Braudel 1985: 359). From then on, England's monetary story started despite the fact that English coins were worn and clipped; that is to say, money has no *intrinsic* relationship to the content of coins.

There were two main forms of private credit, bills and notes later on, increasingly penetrating into the English society from the seventeenth century. Bills in particular began to 'take on the property of more general, but still restricted means of payment. For example, the name of the presenter of the bill was omitted when the bill was drawn and added later as necessary' (Ingham 2004b: 200). The use of bills was further increased. In particular, bills of exchange in such places like Lancaster were widely used for large business transactions in the eighteenth century (Knafo 2013: 190, note 11). The bill of exchange was an important means of payment for inter-regional transactions in the initial stage of industrialisation (Black 1996: 121-2). The increasing use of bills of exchange in the eighteenth century of England was dependent on the London money market for discounting or cashing bills (Joslin 1954) or the possibility of converting their bills to more liquid form of money like the note of the Bank of England increasingly recognised in the process of centralizing the English payment system in London.

In the meaning time, a new form of private credit, banknote, was invented by English goldsmith bankers in the second half of the seventeenth century (Joslin 1954: 168; Davies 2002: 251; Knafo 2013: 88-9). The English bankers issued banknotes and checks by taking 'deposits' (Joslin 1954) or by discounting bills of exchange (Richards 1927: 380; Knafo 2013). It seems likely that they might create new money by issuing banknotes. The vulnerability of the goldsmith bankers, however, were well recognised in the seventeenth and eighteenth centuries; 'the London goldsmith bankers were

notoriously unstable. The disappearance or bankruptcy of firms (goldsmith bankers) was quite common down to about 1710' (Joslin 1954: 171). A series of the failure of the banker occurred often throughout the eighteenth century as well (ibid: 170). It was highly unlikely that the private note, issued by goldsmith bankers, could be transferable beyond their narrowed networks (Black 1996: 120). For instance, Hoare's bank, a great goldsmith bank, in 1725 had its total deposit of 209,074 pounds: the asset (mainly loans) of 90, 868 pounds and the liability of 89, 474 pounds (ibid: 176). It is clear that the goldsmith banking cannot create new money by the transferability of its own debt as a general means of payment in the English society. In other words, the credibility of privately issued banknotes cannot be fully established without state backing. Rather, the public character of the same form of credit, notes, indeed, adopted and issued by the Bank of England, was played as a key mechanism of the London money market operation through which interbank debts were settled, and taxes from the provinces were remitted. Eventually the Bank's money by the late eighteenth century was ultimate liquidity in time of crisis (Joslin 1954; Bowen 1995). The private notes, issued by country banks from the 1870s, was subsequently integrated into the English payment system. It is necessary then to turn to the creation and operation of the Bank of England.

The hybridisation of private credit and public currency in England

The decisive development of modern credit money was to integrate bank credits, bills and notes into sovereign currency to foster the hybridised nature of sovereign monetary space from the late seventeenth century England (Ingham 2004a: 114); England was not the first state, but its monetary development had a great impact on money expansion and management, envied by European states later on. The Bank of England was created in the broad context of a power shift of control over public purse from the Crown to Parliament (Dickson 1967; Roseveare 1991). In particular, 'Charles II's debt default in 1672 was critically important in hastening the adoption of public banking as a means of state

and finance and credit money creation' (Ingham 2004b: 208). The political event invited William Orange to claim the throne and led to the prevention of any recurrence of default in the constitutional settlement of 1689 in which Parliament held control over tax revenue and court (North and Weingast 1989). The political event of 1689 changed the character of state finance: deficit financing secured on tax revenue was established, and the flow of provincial taxes into London and the issue of government debts contributed to the development of the London money market (Joslin 1954: 169)

The London merchants proposed the Bank of England in addition to the long-term borrowing arrangement. In 1694, it was then provided with 1.2 million pounds which was loaned to the king and government, and the loan was charged at 8 percent interest rates which was guaranteed by customs and excise revenues (Dickson 1967: 54; Carruthers 1996: 76-7). Besides, the Bank was given an annual management fee of 4 thousand pounds and the right to take deposits, issued bank notes and discounted bills of exchange (Dickson 1967: 54; Carruther 1996: 77). The initial capital of the Bank increased to a little less than 20 million pounds in 1742, and it managed 'about 70 percent of the national debt' by the 1760s (Bowen 1995: 9-10). The Bank of England became 'a great engine of state' (ibid: 2).

The monetary operation of the Bank of England indeed was towards the gradual process of hybridising the forms of privately issued credit, bills of exchange and banknotes, with state debts: state coins and securities (Ingham 2004a: 129). The detailed process of integrating them into the fiscal system of the English state in the seventeenth and eighteenth centuries cannot be dealt with here; it can be an interesting historical research that Geoffrey Ingham has not explored in detail. The Bank began to issue four different types of paper notes: the sealed bill, promissory notes, the 'acceptable note' and the 'specie note' (Richards 1927: 397). The first two paper notes seem important to the operation of the Bank. The sealed bills, issued by the Bank, were 'assignable and interesting-bearing and payable to

bearer, were largely used in the transactions with the Exchequer, particularly in connection with the loan of 1.2 million pound' (ibid: 398). These papers were convertible into state coins (Keynes 1931: 6, 16; Schumpeter 1997 [1954]**:** 321; Aglietta 2002: 42). The initial loan of 1.2 million was paid to the Exchequer in the form of the sealed bill and promissory notes (Richards 1927: 398). The two forms of paper notes, issued by the Bank, can be regarded as state debts. In other words, the trustworthiness of the notes, issued by the Bank, unlike privately issued notes, was based on 'the government's promise to pay' (Galbraith 1975: 31). The Act of 1704 acknowledged that the Bank's promissory notes were legally assignable (Richards 1927: 401).

The Bank of England began to issue its own notes, resembling those of goldsmith bankers. It developed the written paper into the 'engraved promissory note', which was adopted later by country banks (Richards 1927: 380). The Act of 1708, which discouraged the formation of banks more than six members, prevented the geographical development of English banking and shifted it toward the English monetary system centralised on London in the eighteenth century (Black 1996), during which the London money market had been nurtured by London bankers' active involvement in state debts. The Bank's note from the early eighteenth century was increasingly dominating the London money market (Joslin 1954: 170). Subsequently, the rise of country banks in the second half of the eighteenth century became dependent on the London money market by creating London banking agents for various reasons such as redeeming their notes, settling interbank debts, and transferring funds for investment opportunities (Black 1996: 117). In particular, taxes collected locally were sent to London agents, and they paid 'the tax proceeds into the appropriate government department, probably by Bank of England paper' (Pressnell 1956: 56). By 1785, the Bank note became an ultimate source of liquidity in time of crisis (Joslin 1954: 175), and the Bank developed the capability to 'act as lender of last resort' (Bowen 1995: 16). The central bank's money was placed at the top of English credit money system in which privately issued paper forms, bills of exchange and banknotes, could now be used as

impersonal means of payment.

The significance of the operation of the Bank appears to have the institutional practice of issuing its own note, resembling those of goldsmith bankers (Davies 2002; Knafo 2013). Behind the financial practice, however, the same form of the paper note, issued by private banks and the Bank of England, possess qualitatively different characteristics respectively: the private banknote has a claim on the individual who issues it whereas the Bank note has a claim on the state whose Bank issues it as the state's promise to pay. The operation of the Bank worked towards the gradual process of integrating private credits into state currency. The bills of exchange and banknotes, issued privately, were eventually integrated into the centralised English payment system, operating on the public character of the Bank note. The fusion of private and public monies doubled the volume of British money available to the economy and changed the fundamental character of credit money to be transferable (Ingham 2011: 73; Amato and Fantacci 2012).

Additionally, modern credit money to be further acceptable and transferable needed legal support; it required legal changes to recognise legal rights of credits-money in people's mind and the equal right of a transferee as an original issuer of a private debt to be recognised (Carruthers 1996). In other words, laws concerning the property rights of the credit money needed to be enforced by the state. Law protection of credit money would further facilitate its wide acceptability to people. In fact, it is generally recognised that the modern form of money was gradually replacing metallic coins throughout the 18th century (Keynes 1931: 16; Davies 2002: 279-280). The credit money became eventually fully accepted and transferable in the monetary space defined by the money of account later on. The full acceptability of credit money now meant that the Bank of England issued 'fiduciary' money in which the money of account and the means of final settlement are the same' (Aglietta 2002: 40). That is to say, the particular forms of bank credit such as banknotes, denominated in a sovereign

money of account, were accepted to pay government taxes and widely used in private transactions.

However**,** '[a]ll money is credit, but not all credit becomes money' (Ingham 2004a: 140). Some credits such as bank notes and bills were given full characteristics of money in terms of general acceptance and tax payments. 'Bank notes and checking deposits eminently do what money does; hence they are money. Money is a credit instrument, a claim to the only last final means of payment, the consumers' good' (Schumpeter 1954: 321). By the same token, Keynes (1931: 6-7) pointed out that some types of bank money changed their characters by transforming themselves into state money. However, other private credits such as company coupons and various means of payment are not a 'full characteristic of money' in that they are not immediately accepted to public pay offices to discharge state taxes. Therefore, they remain in a limited monetary space. For example, Dodd regards airmiles as a form of money because it constitutes money of account and medium of exchange (2005a: 578), whereas Ingham thinks that airmiles are not money but 'rather credit with a restricted exchange value fixed in a money of account – dollars, euros, etc' (Ingham 2006: 270). Moreover, airmiles do not fulfill one of the essential features of money, transferability in a given monetary space (Ingham 2006: 276).

Furthermore, private credit forms like Tesco coupons, issued by private companies, may constitute a sovereign money of account, but only contains the exchange value for other commodities or services limited within the network of the private company or of its business partners. In other words, as Ingham points out, no general transferability is involved and acceptable for taxes. Even so-called financial securities such as stocks and bonds do not have the same degree of social acceptability of 'demand deposits' at commercial banks. In normal business days, the financial securities need at least a few transactions to convert to the bank money. No clear distinction between the securities and the demand deposit is recognised. In an uncertain situation, however, the transition from financial securities to the bank money involves more difficulties such as high costs or no conversion at all. Going

through a few transactions can make a big difference in the so-called liquidity crisis. In this regard, it can be argued that money as the transferability of credit and debt relation entails a pyramidal structure in which government debts are positioned at the top, private bank debts in the middle and nonbank and corporate debts at the bottom in a broad sense (Wray 2012: 85-87).

The fact that all money is constituted by the credit and debt relation means that money possesses dual social claims. On the one hand, money conveys a promise to pay or debt. That is, money is a 'debt' for money issuers whereas money is a 'credit' for money users (Innes 1913: 30). The dual dimension of money shows that money cannot be created without simultaneous production of debt. All debts, however, are not equally accepted; debts have varying degrees of acceptance in hierarchy (Wray 1998; Bell 2001) or transferability (Ingham 2004a). For example, debts of persons and firms can be distinguished, in nature of social acceptance and transferability, from debts of banks and the state. State debt is the most socially acceptable and transferable debt in any sovereign monetary space. By the same token, not all private credits are accepted as universal claims on social goods. Therefore, credit money is distinguishable from private credits in terms of its acceptability to society, depending on whether they can have claims on *all* or *particular* social goods.

In sum, the second essential feature of moneyness is characterised as the transferability of credit and debt relation, denominated in a sovereign money of account. As discussed above, the transformation of modern credit money does not involve the direct process of production and trade of goods, but it is rather based on the monetary process of creating and transferring state debt as a general means of payment in the context of the centralising English monetary system. The transferability of state debt through the operation of the Bank of England was the foundational backbone for the wide acceptance of bank credit money beyond their narrow networks. Private credits such as bills of exchange and banknotes were integrated fully into the English monetary system, forming an inner part of the English

sovereign monetary space along with Bank notes, Treasury bills and coins. Thus, the historical transformation of modern money is clearly reflected in the shared process of monetary creation between state and the banking system. Without making a distinction between ancient money and modern credit money, contemporary accounts of money in sociology is subject to criticism. Uprooting the crucial role of the state does not help to improve understanding of modern money. The idea of modern money as the transferability of credit and debt relation will be explored in the process of developing the US dollar as world money in two ways: the public character of US state debt, dollar reserves in foreign central banks, is transformed to private dollars in the offshore monetary space (Chapter 4). Change in the practice of foreign central banks transformed the character of the US dollar beyond the US monetary space. The other one is associated with the development of new hybrid money like certificates of deposit (CDs) in the US financial market. The US dollar in this case possess its transformability into financial assets (Chapter 5).

1.5.3 *Money and State*

The 'valuableness' and value of money

The 'valuableness' of money derives from the fundamental idea of moneyness as money of account, established *only* by the political authority through a mechanism of tax obligation and fulfillment (Knapp 1924). Other subsidiary functions of money such as medium of exchange are believed to result from the essence of money of account (Ingham 2004a; Wray 2012). In the commodity theory of money, the value of money rests on what is embodied into a commodity form of money: either intrinsic value, exchangeability in orthodox economics or labour value in Marxist economics. The value of money, associated with the idea of intrinsic value, exchange value or labour value, is rejected because there is no direct link between money and commodity; there is no obvious link between money and labour as well (Ellis 1934: 105; Ingham 2004a; Wray 2012). The distinction between money and commodity

derives from measure of value (Ellis 1934: 105). Furthermore, the commodity theory cannot explain why nonmaterial money has continued to be transferable and accepted (Bell 2001: 154). The search for the value of money cannot be found in the sphere of market exchange or labour but in the sphere of political sovereignty.

Rather, 'it is the tax which imparts to the obligation its "value"' (Innes 1914: 152). In other words, the value of money is guaranteed or validated by the acceptance of the state for discharging of tax obligation. Therefore, the value of money *'originates with the State'* (Bell 2001: 156, emphasis original). Knapp distinguished valuableness and value; the former refers to money's capacity to have value, general acceptability, established by the state whereas the latter refers to purchasing power that money possesses (Ellis 1934: 15). The state secures the valuableness of money as it accepts in payment of tax obligations at public pay offices. Weber (1947) regards the former as formal value of money, guaranteed by the state, and the latter as substantive value of money, determined by market.

In orthodox economics, the substantive value of money rests on the long-term equilibrating market between quantities of money and goods (Fisher 1922). But even the substantive value of money is not wholly determined by market due to two main reasons (Ingham 2004a: 80-85). Ingham, following Weber, understood the purchasing power of money as 'the enacted outcome of social and political conflicts' between social groups in the domestic economy (ibid: 81). How the struggle of political conflicts comes out can influence the substantive value of money. For example, the emergence of the low inflationary value of money in the 1980s was an outcome of a changing power balance of social groups: the financial sector, the corporation and the labour throughout the high inflationary period of the 1970s during which the alliance between the corporation and the labour was weakened, and the increasing cost of the financial sector could not be borne (ibid: 152-159).

Furthermore, the substantive value of money is also influenced by the expansion of credit and debt

relations relatively independent from the production and trade of goods (ibid: 81). In the relatively autonomous monetary creation, the role of the state, in particular, the central bank, is inevitably involved in the actual process of the monetary expansion. For example, the dynamic process of US dollar production in the US money and international money markets contributed to inflationary pressures in the 1970s and therefore drew the US central bank to deal with the linkage between the money markets and inflationary pressures during the early 1980s (Chapter 6). The high level of interest rates was imposed so that the high purchasing power of the US dollar was maintained throughout the 1980s. The central bank has since then targeted at low inflationary expectations. The monetary policy of the central bank influences willingness of people to hold or spend money which in return has an impact on the value of money in market (Ingham 2004a: 83). States have sometimes manipulated the exchange rate of their currencies for political purposes (Kirshner 1995) or as 'a more prevalent means of altering the domestic value (purchasing power) of money' (Ingham 2004a: 83). It is certain that the state as 'the largest creditors and debtors' not only increases the expansion of money supply but also involves the 'management' of the substantive value of money (ibid: 84).

The dynamic of modern monetary production

In the modern monetary system, the production of money is limited to the state and (commercial) banks. Precious metal coinage as a dominant form of money was replaced by credit forms of the hybridised modern money in the eighteenth century. The modern credit money became a dominant form of money in Scotland (Keynes 1930: 16) and in England and Wales (Davies 2002: 279-280). Since the late nineteenth century, credit money has dominated in most transactions (Ingham 2004a: 136). The conventional understanding of banking was that banks accepted deposits from customers and lent loans on the basis of the deposits. However, 'banks . . . create deposits or bank notes; they appear to manufacture money rather than to increase its velocity' (Schumpeter 1954: 317). Banks create money

by lending. In the current monetary system where there is no clear distinction between foreign and domestic customers and investors, 'there is no limit to the amount of bank money (credit money) which the banks can safely create *provided that they move forward in step'* (Keynes 1930: 26, emphasis original). 'It was in the 1920s when the banking system's pyramid of debts was itself a means of producing *new money'* (Ingham 2004a: 139). In fact, assuming that a bank operates with a 10 percent fractional reserve, the initial deposits of £100 could produce £900 of *new money* in the form of loans (ibid: 140). Bank lending is in general regulated by systemic assessment of creditworthiness.

Besides money creation through bank lending, various types of bank credit have been invented to intensify the dynamic process of monetary creation. From the 1890s, 'finance' bills emerged in order to facilitate interbank dealings in London, developed into an international money market, and were later replaced by 'direct short-term interbank borrowing and lending through deposits and advances' (Battilossi 2000: 151) so that such interbank practices led to the rise of modern foreign exchange market in the 1920s (Einzig 1970: 175). For consumer credit in the early twentieth century, installment credit- a loan is paid in periodical payment-, traditionally used to finance mortgages, was applied to cover 'a whole range of durable consumer goods' (Konings 2011: 64). In the context of the New Deal reform of the US, the Federal National Mortgage Association, sponsored by the US government, bought mortgages from banks to 'create tradable mortgage-backed securities' (ibid: 83).

In particular, negotiable certificates of deposits (CDs), pioneered by Citibank in 1961, functioned as 'demand deposits' with competitive interest rates in order to attract funds back to banks (Konings 2011: 115). Such a financial innovation like new liability management skills, developed in the US, was recognised as a new dynamic creation of bank credit money in the scholarly mind of endogenous monetary creation (Battilossi 2000; Konings 2011). Indeed, the practice of the new liability management was applied to the Euromarket from the mid-1960s and contributed to the revolutionary

development of the international and domestic money market throughout the 1970s (see Chapter 6). In the 1970s, international banks, actively participating in the Euromarkets, issued Euronotes – Floating Rate Notes (FRNs), medium term securities to Eurobonds (Battilossi 2000: 172)- Interbank practices have created such various credit instruments that they have conducted multifunctional operations such as foreign exchange, deposit-taking, Euro-lending, and investment banking.

The American acceptability of CDs, denominated in the US dollar, meant to integrate them into the US sovereign monetary space. That is to say, the dynamic of bank credit creation depends on the acceptability of the new private debt issued to other private actors within the sovereign monetary space. In addition to the characteristics of the CDs like interest-bearing forms of deposits, attractive to customers, the transferability of CDs to third parties necessarily leads to the expanded scope of the US dollar as the state money of account. Thus, the more expanded the production of private credit money has historically been, the more expanded the sovereign monetary space, forcing the continuous transferability of private debt contracts on the role of the state as a monetary authority. The wide acceptance of bank credit money, as discussed above, is possible on the condition that such bank credit money is accepted as part of state fiscal system. Thus, the central bank has to manage the process of monetary production shared between private banks and state. The power of central bank has increased as the production of private bank credit money expands.

A further way to create money is through government borrowing and spending. When the government issues new debts such as bonds and bills, sold to commercial banks and other financial institutions, some of payments to the creditors are deposited with the central bank as 'liquid reserves for crisis management', called 'high-powered money' in mainstream economics or 'base money' (Ingham 2004a: 141). The creation of new government debts can increase the supply of credit money. A government and its central bank can also engage in open market operations to attempt to regulate money supply

through selling and buying of the existing or new governmental debts; this policy is likely to be more effective in such a state whose secondary markets are significant (Germain 1997: 152). The purchase of the government debts by the central bank can lead to an increase in credit money whereas the selling of the debts to the money markets can lead to a decrease in money supply (ibid: 153). The central bank cannot control the aggregate supply of money, but it can influence money *demand* through manipulating interest rates which 'affect any institution in creating or allocating money' (ibid: 157-8). With regard to the important role of central banks beyond the national monetary system, Chapter 4 will show how the policies of central banks contribute to a historically unique process of US dollar production in the offshore money market during the 1960s: the process of US dollar production is not though the monetary base of the domestic banking system but the direct involvement of central banks and their interaction of commercial banks.

Money supply by the means of 'high-powered money', does not apply to all states in the same degree since the issuance of government debts needs to be transited to private use in the banking system. Therefore, the idea of state legitimacy comes to play an important role in the monetary production of high-powered money. For the persistent process of monetary production, firms and people need to put their trust or confidence on money and its transferability which goes beyond bilateral networks of trust. In other words, the transferability of debts to third parties – debt can be 'paid' with debt – necessarily involves the question of confidence or trustfulness on money (Hicks 1989: 48; Carruthers 1996). The confidence in money eventually depends on a social and political legitimacy whereby strangers are able to participate in complex market relations; the making of the legitimacy has historically been the work of the state (Ingham 2004a: 74; 2006: 271). As already mentioned above, a money of account is established and maintained by the state. The stable money of account, enabling the smooth transferability of debt contracts, derives from the legitimacy of the state to market and society. The legitimate state usually possesses an effective capacity to impose taxes on its members

since taxes are seen as a common good to its members to provide public services. Legitimate state is likely to have people to put confidence on money. Overwhelming empirical evidences support that the breakdown of state monies has to do with weak states lacking political legitimacy or experiencing hyperinflation (Cohen 1998; Goohart 1998; Helleiner 1999; Ingham 2006). In those states, foreign monies are very welcomed.

We can see the historical pattern of integrating private credits into state money, whose concept should be distinguished from the conception of 'fiat' money, issued directly by the state. The integration of private bank credit money into a sovereign monetary space should be seen as the hybridising process of private credit money and state money, creating the dynamic process of monetary creation, bounded within the national monetary system. For example, financial innovations such as interest-bearing forms of deposits, developed in the US market, increased the involvement of the US central bank in the actual process of monetary creation both in the international money market and the US domestic market from the late 1960s (Konings 2011). Therefore, the more expanded the production of private credit-money, denominated in the sovereign money of account, has been, the more expanded the sovereign monetary space, forcing the transferability of credit and debt relation dependent on the central bank (Aglietta 2002: 42) because the transferability of modern credit money can be maintained by direct state intervention in time of trouble or through the monetary policy of the central bank in normal times, and because the need for credible money can be met by the issuance of state debts.

Central bank as a monetary authority

Since the modern state has fully established the sovereign monetary space, the responsibility for the transferability or smooth transaction of credit and debt relations falls on a key institution of the state, a central bank. It plays various roles in protecting the value of money and stabilising the monetary and financial system. In fulfilling the role of the latter, a lender of last resort was recognised in the 19th

century. In preventing a contagious bank panic, Walter Bagehot (1999 [1873]), in *Lombard Street,* suggested three principles: the central bank should provide emergent loans freely to troubled banks with 'good collateral' at penalty interest rates (by opening the discount window). However, the three principles were problematic on the ambiguous status of 'good collateral' since 'its soundness depends on when and whether the panic is stopped' (Kindleberger and Aliber 2011: 224). The dilemma of the central bank is faced with timing and quantity of emergent loans.

By the early 20th century, the Bank of England, for example, developed an effective mechanism of its interest policy through discounting bills and open market operations; its attempts to 'force market rates into Bank Rate' were developed into open market operations (Capie et al 1994: 13). The Great Depression of the 1930s led to the recognition of the central bank role as the (international) lender of last resort (Kindleberger 1977: 292). After World War II, a number of central banks were established: 59 in 1950 increased to 161 in 1990 (Capie et al 1994: 6). Inflation in the peaceful 1970s, turned central banks to pay exclusive attention to price stability. The critical role of the central bank, along with the lender of last resort, has since then been associated with management of monetary growth and of market interest rates (Fisher 1994: 264). In recent years, they start to talk about credibility of money in the framework of rule vs discretion (ibid: 263). It is about whether the central bank should follow a strict rule of monetary growth along monetarism or should be given a flexible room of monetary policy to manage changing economic conditions (Blinder 1998; Holmes 2013).

Monetarists argued that a consistent rate of monetary growth through direct control over base money should be able to eliminate an inflationary bias of discretionary money policy (Friedman 1968). It logically promoted the idea of central bank independence from the state. The monetarist argument is premised on the idea that money supply originates from 'outside money', base money, controllable by the central bank. They completely, however, excluded the possibility of monetary creation within the

banking system, called endogenous money in fractional banking. Furthermore, financial innovations such as 'interest-bearing forms of deposits undermined the prior predictability of velocity' (Capie et al 1994: 84). The monetarist idea of the fixed quantity of money supply was formally abandoned in the mid-1980s (Capie et al 1994: 31; Blinder 1998: 29). But the impact of the high powered money is strongly felt in the process of monetary creation. Keynesians argued therefore that the central banks should be given a flexible room for discretionary monetary policy to deal with changing economic and monetary conditions (Fisher 1994).

The economic debate about the rule vs discretion is indeed about how the central bank maintains the credibility of money (Ingham 2004a: 144-151). The central bank maintains credibility in credit money through 'procedural correctness in arriving at interest rates that are intended to regulate the willingness to become indebted' (Ingham 2004a: 145). On the one hand, reaching the 'neutral' long term rate through the nominal Federal funds rate – 'the overnight rate in the interbank market for reserves' (Blinder 1998: 30)- requires a great deal of discretion (ibid: 30-37). The procedural correctness of monetary policy making has little to do with any economic science but with depoliticizing monetary policy of operational independence from politics, an explicit inflationary targeting between 2 and 4 percent and the open communication to the public in 'an epistemic community' shared between experts and policymakers (Ingham 2004a: 145-146). In other words, the actual process of monetary policy making is no longer seen as value-neutral. The substantive value of money needs to be believed in the sphere of exchange as a neutral commodity. In this sense, the value of money is 'managed' by the central bank in cooperation with financial markets. In particular, the money market in government bonds provides the benchmark for interest rates (ibid: 144).

In sum, the role of the state is foundational to where the value of money is originated. The value of money derives fundamentally from the idea of money of account established by state. Without state's

declared money of account, changing myriad exchange ratios of commodities cannot be settled, and debt contracts cannot be widely transferable. In this regard, the value of money rests on state. Furthermore, since modern credit money enables to transfer the social relation of credit and debt to third parties within the sovereign monetary space. Smooth transferability of credit and debt relation, debt contracts, rely primarily on the central bank as a monetary authority. In regarding the development of the US dollar as world money in subsequent chapters, the development of the US central bank is analysed as an inner part of dollar development. In particular, the role of foreign central banks is emphasised on the dynamic of the dollar's credit and debt relations in the 1960s. Chapter 6 will focus entirely on how the US central bank established itself as a global monetary authority over the offshore monetary space.

1.6 Conclusion

This chapter has shown that the conventional conception of money as medium of exchange is an inappropriate understanding of money in essence, and a fundamental misunderstanding of measure of value is highlighted. As reviewing the economic and sociological theories of money, the key essence of money as medium of exchange in the orthodox economic thought is denied simply because money as medium of exchange cannot be established unless a more fundamental feature of moneyness as measure of value is previously established. It is money of account – not as much money as a medium of exchange – that enables the exchange of commodity to occur. The Marxist theory of money considers the essence of money as measure of value. Measure of value for them needs to be embodied in a particular commodity money which can express the objectification of labour value so that the exchange of commodities can occur. As in the case of the orthodox theory, measure of value cannot be reduced to a commodity money, and the relationship between commodity money and labour value is indeed anachronistic. The key essence of money is not medium of exchange, but measure of value

of credits and debts which cannot be embodied into commodity.

The sociological theories of money have found no interest in generalising money. Rather they have turned to the thick description of money as social and cultural meanings in various social contexts. Money is largely seen as a symbolic medium of exchange. Understanding money as cultural meanings turns attention away from what underpins the historical transformation of money. It seems doubtful that they contribute to enriching our understanding of modern money. Like the orthodox economic theory of money, the sociology of money rules out the crucial role of the state. In this regard, money is fundamentally conceptualised as apolitical. The heterodox tradition of monetary thought, unlike the social theory of money, takes the vital role of the state into serious consideration. My review of the heterodox monetary school identifies three defining attributes of moneyness: money as money of account, the transferability of credit and debt relations denominated in money, and the foundational and constitutive role of the state.

The first essential feature of moneyness is measure of value which cannot be reduced to a particular commodity or labour value. Rather measure of value is abstract and intangible measure, money of account, embedded in monetary units not in commodities. Money of account is established by the political authority, the state in general, as a means of standardising and measuring tax obligations or tributes (i.e. debts to the state). The fundamental essence of money is not medium of exchange but money of account. The second essential feature of moneyness is social relation of credit and debt denominated in money of account. Money is always a credit for money holders, and money is a debt for money issuers. The emergence of central bank transformed the bilateral relation of credit and debt to the multilateral debt relation. The operation of central bank enabled the transferability of government debts and eventually hybridised some private credits such as banknotes and bills of exchange to state currency. Since then, the dynamic character of modern hybrid credit money was

born. The third essential feature of money is the constitutive role of the state as discussed in the establishment of money of account and the transformation of modern money. The creation of transferable government debts and of the central bank was foundational to the emergence of the hybrid modern money. The process of money production is shared between the state and the banking system. But, the whole responsibility of maintaining the credibility of modern money falls on the central bank as a monetary authority.

In the later chapters of this thesis, the three essential features of moneyness will be used as an analytical framework to explore the historical processes of monetary transformation through which the US dollar becomes world money. Four key developments will be identified as contributing to this transformation, beginning with developments set in train by the 1944 Bretton Woods Agreement and ending with those associated with the Volcker Shock in the early 1980s. In characterising the dollar from a perspective of that stresses the three essential features of moneyness, the thesis will demonstrate how the dollar slowly came to hold each of these essential features beyond the confines of US territory. That is to say, the dynamic process of dollar creation, not only in the domestic market but also in the international market, will be explored along the notion of re-emergence of global finance.

By considering how the three dimensions of moneyness come together for the US dollar beyond the national monetary space, the thesis will subsequently draw attention to the dynamic nature of the US government debt as part of the complex relations involved in the development of the international money market (see Chapter 4). As discussed above, modern credit money is characterised as distinctively hybridised by the process of integrating private credits into state money (Ingham 2004a, 2004b) so that the conception of hybridized modern money is very useful to interpret the dynamic relationship between the invention of private financial innovations and the state in the domestic

context, but also the dynamic process of monetary creation in the international money market. The thesis aims to explain the construction of the dollar as world money, not only involving changing features of the dollar itself but also developing the constitutive role of the US central bank eventually as a global monetary authority over the international money market.

Indeed, the heterodox idea of hybridised modern money is used to characterise the US dollar in subsequent chapters, but the heterodox school has not taken into consideration the dynamic process of monetary creation beyond the sovereign monetary space. In other words, the global dimension of money like the dollar has not been discussed at all. In this regard, IPE scholars, though not specifying on the conceptualisation of money as a point of departure, have contributed to our understanding of dollar rise, clearly distinguished from mainstream economic explanation which places essence of money as neutral medium of exchange in international trade for example (see Chapter 2). They have paid primary attention to the role of the state, the process of financial market transformation and the process of institutional transformation, as reflecting on the process of dollar rise as world money. The next chapter shows how the three waves of the IPE literature have explained the international rise of the dollar and their inadequate engagement with money and monetary transformation is revealed.

Chapter 2 The International Political Economy of the Rise of the US Dollar

2.1 Introduction

Chapter 2 engages extensively in the existing IPE literature which has delved into various processes through which the US dollar could be argued to have become world money. Regarding the overall argument of the thesis which is that the rise of the US dollar is a process of monetary transformation, this chapter aims to serve two purposes. First, and drawing on Chapter 1, the inadequate conceptualisation of money in the IPE literature and its implications for understanding the process of the US dollar's rise is highlighted throughout. Second, and again drawing on Chapter 1, particular insights are identified taken from the IPE literature to develop the framework for the analysis of the monetary processes of the US dollar in subsequent chapters. The three waves of IPE literature that the chapter pinpoints have indeed enriched understanding of the US dollar's development in the post-WWII era by providing the important study of key historical events and identifying such key agents as the state, financial markets and institutions. Their explanations of the rise of the US dollar are, nonetheless, are incomplete because of their neglect of the essential monetary features and transformations of the US dollar. Thus, given the conceptual framework of moneyness developed in the previous chapter, this chapter reveals how the international rise of the US dollar in the IPE account has been inadequately understood. The implicit distinction of the dollar as public vs private money has led the three waves of the IPE to prioritise their conceptual point of departure from the state to market and institution. More specifically, they have shifted the objective of analysis from the political characterisation of money, to the process of market transformation and the process of institutional transformation in making sense of the international rise of the dollar.

In opposition to the economic explanation for the international rise of money as medium of exchange in the sphere of market exchange, the image of money, in the first wave of the IPE, is perceived as state currency, in the notion of 'money things', issued and controllable by the state. The conception of currency contains a unit of account, but it is downplayed in the process of actual analysis. Money is typically regarded as the exclusive monopoly of state sovereignty. The international use of national currencies is, thus, determined by major powers in the system of inter-states (Strange 1971). Perceived in this way, the historical development of the US dollar is viewed to derive *unquestionably* from the strength of the US state power and economy during the Bretton Woods period. The relationship between money and state is importantly recognised, but overlooks that the state is not the only issuer of money. The static relationship between money and state cannot explain how the dollar, also created in the rapid expansion of financial markets, was developed into world money as a choice of private actors beyond the state.

Contrary to the conception of the US dollar as the exclusive monopoly of the state, the second wave of the IPE shifted attention from money to financial markets. The transnational expansion of autonomous financial markets, deriving from either the Eurodollar market (Frieden 1987; Cerny 1993a, 1993b) or the demise of the Bretton Woods monetary system (Strange 1986; Walter 1991; Germain 1997; Langley 2002), is regarded as the real agent of expanding the volume of dollar-based financial transactions. In the process of financial market transformation, the dollar is conceptualised increasingly as facilitating financial market transactions. The notion of financial flows or mobility indicates the widely received concept of the dollar as an exchangeable commodity in expanding financial markets. The historical rise of the dollar is, therefore, believed to derive *exclusively* from the expansionary process of financial markets. In particular, the explosion of the *private* dollar is assumed to occur at the demise of Bretton Woods formal institutions in the early 1970s. The globalisation of the dollar is considered a *given* function of the privatisation of global finance.

The exclusive focus of the second IPE on financial market processes overlooks the process of constructing a new institutional framework which enables the explosion of private global finance in the first place. Therefore, the third wave of the IPE has drawn attention to the creation of a new institutional framework and its external development, making possible the international consolidation of the US dollar (Burn 1999, 2006; Seabrooke 2001, 2006; Konings 2007, 2011). The new institutional framework, associated with a new private monetary space or new financial practices and relations, was projected into the international realm and transformed global finance. The projection of the institutional structure to the Euromarkets in particular reflects the process of rapidly developing the dollar into world money, accepted to the international markets. The externalisation of the new institutional framework is, however, assumed to translate *incontestably* private dollar debt issued to the Euromarkets where the same dollar debt was bought and resold. The nature of change is a new institutional framework like new financial practices, attractive to foreign banks, not necessarily what the new financial practice produces. In other words, the assumed transferability of dollar debt between US banks and foreign banks requires a further explanation for the universal acceptance of the dollar in the Euromarkets.

The three waves of IPE have evolved in a way that they construct their research problem by responding to what the previous IPE wave has overlooked in making sense of dollar development. The character of the US dollar remains the same however. In what follows, section 2.2 begins to engage in the review of the first wave of IPE with focus on the relationship between money and the state. In doing so, it highlights how the hegemonic stability theory has incompletely grappled with money. Section 2.3 shows the exclusive focus of the second IPE on autonomous financial market processes as a key mechanism of dollar development. Key historical events they considered crucial are identified without understanding the underlying monetary process of financial market development. Section 2.4 highlights what remains under-theorised in the third wave of IPE. The building process of new private

institutional configurations contains the important monetary development of the US dollar. A lack of attention to the substantial change of the US dollar is revealed. The concluding section 2.5 provides a brief explanation to the general acceptance of US dollar debts in the Euromarkets. Insights of IPE achievements are shown to help to consider key historical events on which the analysis of the three essential features of the US dollar can focus in subsequent chapters.

2.2 The First Wave of IPE: Money and State

It has been widely held in mainstream economics that international currencies are classified by economic functionality. International currency like a domestic currency performs three monetary functions as a medium of exchange, a unit of account and a store of value (Cohen 1971, 1977). As a medium of exchange, international currency is used by private and public actors to settle international economic transactions (transaction currency). As a unit of account, it is used to denominate international goods and services at the private level and used as anchor at the governmental level to which other national currencies are pegged. As a store of value, it is used as a private investment asset or as a reserve currency (Cohen 1971: 28-32). As discussed in the previous chapter, the economic functionality of money such as unit of account and store of value is fundamentally believed to derive from the key essence of money as medium of exchange in orthodox monetary thinking. So, when it comes to the notion of money as unit of account, its primary function is seen to price goods and services for market exchanges not to measure credit and debt (Kindleberger 1981: 9-17).

The typical economic explanation of the rise of international money thus rests on the sphere of commodity exchanges. A national currency is chosen by private market actors searching for low transactional costs in trading goods and services across borders. The national currency is smoothly turned to international money as it facilitates international trade (Kindleberger 1967; Swodoba 1968; Cohen 1971: 26). In this regard, the international rise of the dollar in the context of the post-WW II era

with inconvertible European currencies is seen as a result of its international medium role in lubricating the expansion of international trade (Eichengreen 2011: 39-49). Similarly, others argue that the process of transforming a national money to world money is seen as the outcome of 'natural monopoly', emerging from integrating the economic activity of the issuing state like the large size of the US economy into world markets (McKinnon 2009: 46). As a result, the rise of international money is purely viewed as a natural outcome of the integrating process of the issuing state's real economy into world economy through which its money functions to facilitate international trade.

Contrary to the economic explanation of international money, Susan Strange, for the first time, provided a political theory of how international currencies were established in what political conditions between the issuing state and the receiving state in her early book, *Sterling and British Policy* (1971). It was argued that the political power of the issuing state determined the international use of a national currency: 'master currency' by a hegemonic or imperial state, 'negotiated currency' by a declining hegemonic state or by a rising hegemonic state (Helleiner 2008), 'top currency' by the economic attractiveness of the issuing state as a necessary condition in the short term and by the political power of the state in the long run, 'neutral currency' only by the economic attractiveness of the issuing state (Strange 1971: 1-72). The political interpretation of international currency made a crucial contribution to subsequent IPE scholarship.

Strange showed, however, that the historical development of the dollar derived *unquestionably* from the strength of the US state. When she discussed the political and economic characteristics of top currency, it was the only international currency as the choice of world market and states so that it was inherently linked with the international monetary system (ibid: 39). Her discussion of top currency indicated the important role of private credit money denominated in top currency; the currency as the most widely used money should have the capacity to 'absorb the consequent strains' (ibid: 33): the

feedback impact of the credit money on the economy of the issuing state. Her perception of international currency, thus, constituted a money of account and different forms of money and credit. Even though she recognised the importance of bank credit money in the case of top currency, the political power of the issuing state ultimately determined the international use of a particular currency, even the case of top currency in the long run. She pointed out that the US dollar was the only international currency being qualified in the all four categories of international currencies, as she correctly observed that the dollar was not separated from a reserve currency and a vehicle or transaction currency (ibid: 17). That is exactly the coexistence of government securities, notes and private bank credits outside the US monetary system.

Analogously, Benjamin Cohen perceived the dollar as a national currency, issued by the state, but his understanding of the rise of the dollar rested on the 'adjustment' dilemma of the Bretton Woods system. Across sovereign borders, 'some integrative mechanism must exist to facilitate interchanges between local money systems' (Cohen 1977: 3). Facilitating interchanges as a key mechanism of developing international currency was 'performed by the foreign exchange markets, which is the medium though different national moneys is to transfer purchasing power between countries – that is, to expedite exchanges between a local currency and foreign currencies' (ibid: 18). Since demand and supply did not match in the foreign exchange market, international monetary disequilibrium was expected to exist and to cause the fundamental issue of any international monetary system: the 'balance of payments' and international adjustment problems as two key issues of international monetary order or system.

Thus, since the Bretton Woods monetary system, for Cohen, did not specify any mechanism of international adjustments, except the dollar as an international medium of exchange, the historical rise of the dollar was seen as a *received* process of amalgamating the inherent problem of the Bretton

Woods system: no mechanism of international adjustment to maintain 'balance of payments', as Western Europe and Japan recovered and started accumulating dollars. For example, the debate between Western Europe and the US on the growing reserve role of the dollar in the 1960s was seen to derive from a byproduct of the inherent dilemma of international adjustment: both sides complained the other on who had responsibility of costly adjustment. What is left unaccounted in his interpretation is the analysis of dollar development as international money. The dynamic process of dollar creation, relatively independent from the real US economy, in part made it difficult to resolve imbalanced international adjustments in the first place. The analytical point of departure should be reversed: how the international rise of the dollar as world money contributed to the problem of international adjustment (see Chapter 4 for more details). In a conceptual sense, the consideration of such issues as balance of payments and adjustment towards international equilibrium follows the assumption that money is primarily a neutral veil in the exchange ratios of commodities. If money is, however, constituted through and by debt relations, relatively independent from the real economy, international imbalances are expected.

2.2.1 *Money and the US State*

In hegemonic stability theory, money was seen as a tangible source of state power. That was exactly what political economists traditionally thought of as state currency, issued only and controllable by the state, as discussed above. The exclusive monopoly of the state to issue currency led them to reduce to a controllable resource of the state the complex relation of money and the state in terms of monetary creation and management both within and outside the national monetary system. The hegemonic stability theory assumed a world monetary role, resulting *unquestionably* from the strength of the hegemonic state or economy. Thus, the international dominance of the dollar was naturally given during the Bretton Woods period which the high point of US state power or economy was recognized

(Keohane 1980; Gilpin 1987).

The proponents of hegemonic stability theory did not make any further contribution than Susan Strange in advancing our understanding of the relationship between money and state. Rather they, as Strange emphasised, misinterpreted the nature of the US power in international finance by regarding a loss of the US' gold reserves as a significant sign of declining US power in the 1960s and 70s. For example, Robert Keohane (1980: 146) accepted the face value of the US tangible monetary source and argued that the end of the Bretton Woods system was seen as a decline of the US hegemonic power in world monetary affairs (represented as a debtor country), whereas western Europe states and Japan were creditors and their currencies were thus on the rise. Unlike Keohane, Gilpin paid attention to the changing status of the dollar during the Bretton Wood system as he viewed the 'hegemony of the dollar' after 1964 (Glipin 1987: 134). His perception of the dollar in the 1960s was associated with the reserve, transaction and intervention currency. The hegemonic status of the US state was rather dependent on the hegemony of the dollar (ibid: 137). Nevertheless, he assumed that following Cohen (1977), US balance of payments deficits provided international liquidity, and the US central bank played the world's central bank (ibid: 134).

There was a strong tendency in the hegemonic stability theory to regard the US as a hegemonic power and the US central bank as the world's central bank during the Bretton Woods system since the US balance of payment deficits was seen to provide international liquidity (Cohen 1977, Keohane 1980; Gilpin 1987). Susan Strange argued that the hegemonic state might establish its currency as master currency, but it could not provide top currency naturally as a choice of world market. The strength of the US economy might contribute to the international appeal of the US dollar during the Bretton Woods period. However, the idea of the US balance of payments deficit as a common good in the name of international liquidity was effectively challenged by Calleo (1982) and Walter (1991). David Calleo

(1982: 89) pointed out that 'The United States was not running deficits to provide liquidity to others, but as a by-product of pursuing its domestic and foreign ambitions'. According to Andrew Walter, 'there is little evidence for the US having played the role of central bank to the world' (1991:186). More fundamentally, the general perception of the US state as the world's monetary hegemon was effectively challenged by Geoffrey Ingham (1994) arguing that the US state did not possess organisational or infrastructural capacity to manage the global monetary role during the Bretton Woods system, reflecting the fact that the US financial market was not able to provide international liquidity to the world. The strength of the US state and economy was not naturally translated to a world monetary role. Rather, the transformative processes of the US dollar as world money from the 1950s onwards drew the US central bank into coping with the dynamic US domestic and international money markets and to eventually establishing itself as a world monetary authority (see Chapter 6). The point is that this is not an inevitable outcome of the position of the US as the hegemonic state or of the strength of its economy naturally leading to the Federal Reserve, playing a global monetary role.

2.2.2 *The Full Establishment of the Dollar as an International Reserve Currency?*

Further discussion about the dollar and the US hegemonic state requires to engage with Andrew Walter who paid attention to the reserve status of the dollar and the private bank credit. Even though his explanation of the re-emergence of global finance is very similar to the second wave of the IPE with exclusive focus on 'disembedding' or efficient financial markets, he did not share with the second IPE the idea that the expansion of private financial markets would necessarily lead to the decline of the US state in particular. Unlike the hegemonic stability theory, Walter understood with Ingham that the monetary rise of the US state was rather to destabilise the post-war world monetary system**;** weakening the monetary link between gold and the US dollar, for example. In other words, US monetary power was not declining but rather *rising* during the Bretton Woods period. The organic

relationship between the hegemonic state and its assumed world monetary role needs to be corrected.

Walter paid attention to the complex process of modern monetary creation*, shared* between the state and the banking system (Walter 1991: 36-47). In particular, he recognised the dynamic process of financial innovations which enabled banks to lend loans first and meet reserve requirements later; banks were seen not as passive receivers of deposits but as active creators of money (ibid: 43). Perceived in the dynamic process of monetary creation, the end of the Bretton Woods, for him, was viewed not by the decline of US hegemonic power but by a process of how the US state dealt with the dynamic nature of financial innovations (ibid: 36-47). The historical rise of the US dollar, for Walter, did not start with loans of $3.75 billion to Britain in December 1945 and Marshall Aid after 1947 because an injection of US dollars into western Europe did not lead to the multilateral plan of the Bretton Woods system such as the convertibility of European currencies, but it rather led to an expansion of bilateral currency arrangements until the early 1950s (ibid: 161).[3]

The international rise of the dollar, as Walter pointed out correctly, rests on the establishment of European Payments Union (EPU) as a significant step in the restoration of European economies and payments. The success of the EPU and the revival of European economies led to the accumulation of large monetary reserves, primarily US dollars and gold (ibid: 164). He then assumed that the dollar as an international reserve currency was fully established in the 1950s. Whether the dollar was established as an international reserve currency remains debatable in that period. As he said, the 1958 European currency convertibility, however, led to 'a shift in the reserve preference of central banks in

3 The US dollar as international money was distinctively started from the operation of the European Payments Union (EPU) in which the dollar as an international measure of value, initially nurtured from the 1944 Bretton Woods 'agreements', was practiced by European governments for facilitating means of payments among themselves on the value of their currencies anchored on the fixed price of gold expressed in the dollar's measure of value. In other words, the dollar as international measure of value provides a central mechanism for settling inter-governmental debts during the EPU (see Chapter 3 for more detail).

favour of gold rather than US dollars' (ibid: 166). The full establishment of the dollar as an international reserve currency requires more than the factual status of the dollar at face value. In other words, an international money market was crucial for the dollar to be fully developed as world money. Otherwise, the reserve role of the dollar would be very limited and static in the status of master currency in Strange's term.

The first wave of the IPE made an important contribution to the field of money and finance, typically regarded as the economic domain, by drawing political elements of international monetary relations for the first time. Indeed, they provided enriched political understanding of the complex relation between money and state. It is generally accepted that money is not separable from state. Money is political in nature. This correct and significant observation has led IPE scholarship to focus on the politics of exchange rates after the end of the Bretton Woods system (Henning 1994; Kirshner 1997; Broz and Frieden 2001). Politics around the external value of national currencies remains vital today to understand politics of international monetary relations.

With the exception of Andrew Walter who recognises the dynamic process of modern monetary production, shared between state and banks, however, the conception of money (the dollar) is regarded as 'fiat' money, issued directly by the state. In particular, the dollar is seen as a tangible power resource, controllable by the state. Therefore, the development of the dollar is believed to derive *unquestionably* from the strength of the US state during the Bretton Woods period. As the hegemonic stability theory showed an inadequate relationship between the dollar and the US state, the perception of the dollar primarily seen as a controllable public currency led them to overlook the expansionary role of financial markets which facilitate dollar-based transactions across borders. The second wave of the IPE, thus, shifted the objective of analysis from the static relationship between money and state to financial market processes as the real agent (Strange 1986; Frieden 1986; Cerny

1993a, 1993b; Germain 1997; Langley 2002).

2.3 The Second Wave of IPE: A Shift from Money to Financial Markets

In her later books, *Casino Capitalism* (1986) and *Mad Money* (1998), Strange turned attention to the development of global finance. Her perception of money and the dollar was extended to include the bank credit money such as savings and loans, in particular, the creation of credit money in the banking system. Unlike her contemporary IPE scholars, the end of the Bretton Woods system was not a result of a 'hegemonic dilemma': the US lost power due to the growing cost of its hegemonic burden (Krasner 1983; Keohane 1984). The end of the Bretton Woods system led to 'the universal use and acceptability of the US dollar' (Strange 1986: 22), as it led to the integration of national financial markets through a means of international capital mobility. Thus, the explosion of the private dollar was seen as a byproduct of the process of eliminating Bretton Woods institutions. In later stage of Susan Strange, money still mattered in global high finance. Her embrace of the bank credit money reduced the reserve character of the dollar as monetary dynamic to an international medium of exchange in international trade and the foreign exchange market. Even though she argued that money was inherently political and inseparable from politics in the sense of its management at the domestic and international level, money, the dollar, was seen primarily as an exchangeable commodity as her interest in the monetary role of the state faded away.

Similarly, others paid exclusive attention to the expansionary process of financial markets primarily, developing either from the Eurodollar market (Frieden 1987; Cerny 1993a; 1993b) or from the demise of the Bretton Woods system (Germain 1997; Langley 2002). In the expansionary process of financial markets, the dollar is increasingly regarded as an international exchangeable commodity. The autonomous process of financial market expansion, for example, was 'the real agent of change' (Cerny 1993a: note 9) and the force of the Euromarkets shifted 'the *composition* of financial exchanges away

from loans to negotiable securities (Cerny 1993b: 59 emphasis original). Jeffrey Frieden also regarded the expansion of private international banking, the Euromarkets as a key mechanism of global financial development. The development of the offshore market was reflected as the growing role of the private dollar (1987: chapter 4). He regarded the Eurodollar as complete private or stateless dollars. Indeed, the actual use of the Eurodollar in terms of decisions about where to lend or invest was private in nature, but the character of the Eurodollar itself was not completely stateless. It is fair to say that the Eurodollar was indeed the US dollar in terms of its denomination and the process of creating new US dollars in the Eurodollar market. More importantly, it gradually drew the US central bank to intervene in the market as a monetary authority in 1979.

The historical emergence of the US dollar, for Germain (1997: 78-92; Langley 2002: 86-87), started with the fact that the US state provided long-term loans to western Europe from the late 1940s so that the long-term dollar played an important role in material expansion in the world economy. However, similar to Strange, the critical event for the international acceptance of the dollar rested on the end of the Bretton Woods system, seen as a process of the privatisation of global credit system. Indeed, the close attention to bank credit, in particular long-term credit, provided a nuanced explanation for the international monetary order as they suggested to turn IPE scholarship away from the focus on liquidity, exchange rates and adjustment as IPE field of inquiry at that time. Nevertheless, the conception of the US dollar in the post-Bretton Woods era, is seen primarily as an exchangeable commodity in the emergence of a market-based understanding of the rise of the dollar as US money.

At first blush, it would perhaps not seem appropriate to place Eric Helleiner (1994) in the second wave of IPE literature, not least because he challenges historical accounts that regard the globalisation of finance to be a direct consequence of technological advancements and market developments by stressing the crucial role of the state. Helleiner's emphasis on inter-state competition and state

deregulation initiatives appears to contrast, for example, with the close attention paid by Randall Germain (1997) to financial market developments. When calling for much greater attention to the role of the state in financial globalisation, Helleiner seeks to answer an analytical question: 'why has such an open international financial order emerged in an era when states have retained numerous restrictive trade practices?' (Helleiner 1994: 3). The answer he offers turns on how 'the unique mobility and fungibility of money' leads to sharply contrasting inter-state dynamics in international trade and international finance (ibid: 18). While the creation of relatively unrestricted cross-border trade flows requires collective action and agreement between states, more-or-less unilateral decisions by a powerful state to open up and internationalise their domestic financial markets serves to unleash pressures for deregulation that other states struggle to resist.

For Helleiner, then, the relationship between states and international financial markets is understood as constituted through the operation of money's unique features as a mobile and exchangeable commodity at the international level. The uncontrollable international capital movements and competitive pressures to follow suit that both arise from deregulatory decisions by key states are, ultimately, the result of 'two characteristics of money: its mobility and fungibility' (ibid: 7). However, a problem remains in Helleiner's account of financial globalisation: he takes the key essence of money as an exchangeable commodity at the international level to be a *given,* not something to be explained with reference to processes of monetary production and transformation. Indeed, his understanding of money as an exchangeable commodity eventually undermines his thesis in that he argues all states are subjected to the force of international capital movements in the 1980s. For instance, he interprets the Volcker Shock in the early 1980s as a subjection of the US state to the force of international financial markets. The conceptualisation of money as an exchangeable commodity leads him to overlook the crucial but *constitutive* role of state institutions (especially central banks) in the processes of monetary transformation that underpin financial globalisation, as is typically the case across the second wave of

IPE literature. Thus, despite his attention to the nature of international money, it is actually appropriate to place Helleiner alongside the others who have contributed to the second school of IPE. He neglects to consider how the mobility and fungibility of money at the international level was not an essential feature of money. Rather, as this thesis will argue, processes that rendered US government debts transferable across borders were foundational for the mobility and fungibility of money (the US dollar) at the international level.

In general, the second wave of the IPE placed the exclusive focus of private market processes on the development of the dollar as a key mechanism. The significant expansion of the private US dollar was primarily believed to result from the end of the Bretton Woods monetary system, as the turn to floating exchange rates intensified international capital movements across borders (Strange 1986; Helleiner 1994; Germain 1997; Langley 2002). Perceived in this way, the historical development of the dollar is viewed as a *given* outcome of the force of private global finance. In particular, the production of the US dollar has depended, therefore, on the capacity of the US financial market to expand dollar credits and the willingness of foreign investors and central banks to support the expansion. The dominant role of the US dollar is viewed as an outcome of America's highly developed financial market (Helleiner 1993: 208, 2008: 358; McNamara 2008). The US financial markets exert a kind of 'deposit-compelling' power (Germain 1997; Langley 2002) or 'pulling'-power on internationally mobile capital which is in search of returns on investment (Helleiner 1993).

Therefore, the historical process of establishing the US dollar as world money does not have to be specified since the force of the US financial market does the job exactly. Rather, the capacity of the US financial market to pull international capital was established *only after* the historical construction of the US dollar as world money in the early 1980s. The exclusive focus of the second IPE on private financial market processes does not recognise the significant monetary roles of the US dollar beyond

market exchanges and overlooks the dynamic process of establishing a new institutional framework through which the explosion of private global finance took off in the first place. The adequate engagement with the process of the new institutional development was taken seriously by the third wave of the IPE (Burn 1999, 2006; Seabrooke 2001, 2006; Konings 2007, 2011). They projected the process of distinctive institutional configurations into the international realm to explain developments of the dollar.

2.4 The Third Wave of IPE: Distinctive Institutional Developments

For Gary Burn, the international expansionary use of the dollar was premised on the rapid development of a private offshore monetary space independent from domestic politics, in which the transaction of dollar debts is seen to be completely free from monetary authorities (Burn 1999, 2006). That is to say, the Eurodollar for him is the completely private dollar in nature. It is believed that, as the Eurodollar market as the non-regulatory monetary space was established in the 1950s, the evolutionary process of the money market with the creation of the 1963 Eurobond market made the dollar internationally freely used, deposited and re-lent. In particular, the 1957 sterling crisis imposed a restriction on the use of sterling in financing international trade between British former colonies so that the crisis instead led British banks to adopt the dollar to finance the international trade and therefore developed the Eurodollar market dramatically (Burn 2006: 18-27).

However, the widely used dollar in the early 1960s, according to him, was 'contradictory' since dollars held by foreigners exceeded the US gold stock, leading to the devaluation of the dollar, and the contradictory dollar exacerbated the problem of US balance of payment deficits in the 1960s (ibid: 136). The contradiction of the dollar, according to him, was viewed to be resolved by the creation of the Eurobond market where European capital would be used to finance dollar denominated Eurobonds, reducing the pressure on the US balance of payment deficits (ibid: 147). As he observed,

the issuance of Eurobonds was, however, financed by Eurodollars. The problem of US balance of payment deficits was worsened throughout the 1960s. The assumed contradiction of the dollar was intensified throughout the decade. The puzzle is then why the problematic dollar continued to be internationally accepted. It seems doubtful about whether the contradiction of the dollar itself was there in first place.

Burn's understanding of the dollar's contradiction was based on the widening gap between the excessive expansion of the offshore dollar and the US gold stock. The excessive quantity of the former relative to the latter was assumed to be problematic on the international monetary system. This line of monetary thought precisely indicates where his perception of money rests; money (the dollar) is seen primarily as an exchangeable commodity. The real issue of the widening gap is, however, not the dollar itself, but the fixed, unstable ratio between the dollar and gold in the growing world economy, demanding more dollars. Certainly, the dollar was used as a commodity to speculate on currencies in the foreign exchange market, and the dollar as a medium of exchange was used by British banks to finance international finance after the 1957 sterling crisis. If the dollar was seen primarily as an international medium of exchange, the rapid development of the Eurodollar market, before the supply of the 1973 petrodollar, would be explained through the process of deposit-creating multiplication; that is to say, international borrowers should use offshore dollars to produce goods, and a certain proportion of the same dollar should be deposited back to international banks operating on the Eurodollar market. However, as many experts pointed out, deposit-creating dollars was marginal not dynamic in the Euromarkets[4] because it was well known that Eurobanks held a very marginal reserve

[4] As detailed in Chapter 4, the absence of reserve requirements in part forced Eurobanks to respond enthusiastically to the availability of US government debts, placed by foreign central banks so that the public character of the US dollar as US government debts created the dynamic process of new dollar creation. In this regard, the character of the dollar as the world's 'high-powered money' should be seen more than an international medium of exchange or an international exchangeable commodity in the sphere of market

due to no reserve requirement. Or, the adoption of new financial instruments such as negotiable CDs was a late development to explain the early establishment of the Eurodollar market. Even if the allocation of US ordinary dollars from the US in part contributed to the Eurodollar market, the international acceptance of the US private US dollar to other foreign banks, as was raised in the introductory section, needs to be explained.

Specifically, a question not raised, regarding the rapid development of the Eurodollar market in the 1960s and the 1970s was, as Burn showed (2006: 29), why the dramatic increase of dollar reserves in foreign central banks was closely linked to the rapid development of the Eurodollar market. What is left unaccounted is how the qualitative change of the Eurodollar led to the quantitative increase of dollar transactions in the 1960s. Indeed, he recognised the primary source of Eurodollars coming from central banks as suppliers and borrowers (Burn 2006: 24). However, his perception of the dollar as an international medium of exchange prevented him from seeing what the dollar, held by central banks, could create the dynamic process of offshore monetary creation. The absence of reserve requirements in Eurobanks and the perception of the dollar as an international exchangeable commodity cannot explain the rapid development of the Eurodollar market throughout the 1960s; that is to say, the dynamic expansion of the Eurodollar market required the participation of central banks holding US government debts. Foreign central banks for various domestic reasons started to place US dollar reserves from the early 1960s in the Eurodollar market where the small amount of US government debts could easily stimulate Eurobanks with a lack of reserves to respond.

Therefore, there is a need to explain how the rapid development of the Eurodollar market was closely associated with the reserve role of the US dollar beyond an exchangeable commodity. In doing so, this

exchange

thesis denies the widely perceived conception of the dollar primarily as an international medium of exchange. The assumed contradiction of the dollar rather can be seen as a sign of strengthening the dollar as the process of monetary development, relatively independent of expanding world trade and production. The problem of US balance of payment deficits, as Burn carefully observed, was an outcome of the underdeveloped US money market and the attractiveness of the Eurodollar market, reflecting a unique monetary process of developing the dollar as world money. Apart from his inadequate conceptualisation of the dollar, he overlooks the active role of foreign central banks in the development of the Eurodollar market.

Leonard Seabrooke (2001), coming from a Weberian conception of the state, not as a passive entity, controlled by private interests, recognised the constitutive role of the state as much active as private banks in the making of global financial markets. Seabrooke (2001) expanded the conception of the dollar by embracing private bank credit money (and assets) and US government securities. The volume of private bank credit money was expanded by the socialisation of finance in the 1960s, as the personal, corporate and government levels all started to involve financial activities such as issuing and trading securities, direct financing in his term. In particular, the US government encouraged private intermediaries and ordinary people to be involved with financial activities, and the state itself was an important constitutive component of developing direct financing by issuing its own securities. Drawing from a Weberian conception of the state, unlike the first and second wave of the IPE, he understood the state not as a fixed entity, but 'as a 'state-society complex' that could constitute itself to domestic and international change' (ibid: 41). It was important for him to recognise that 'finance and the state cannot be removed from each other' (ibid: 38) because the power of US finance should be embedded in the US society. The US state, private banks and society benefited from direct financing in the 1960s and 1970s. In his later book (2006), *The Social Sources of Financial Power,* low-income groups were further integrated to explain US financial power in international finance. Therefore, the volume of the

US dollar and US financial power seemed to be reliant on how broadly and deeply the US population was integrated into direct financing.

The process of developing the world status of the dollar was closely linked to the externalisation of the US financial practice and relations to the Euromarkets in the 1960s and their intensification in the 1970s. As US banks, equipped with a large capital base and familiar with direct financing, went abroad, they were able to sell US debt effectively on the Euromarkets. In the process of selling US debt abroad, the numeraire status of the dollar, established at Bretton Woods, provided 'US international banks an opportunity to monopolize the issue of dollar-denominated liabilities with zero exchange risk and commercial loans, investment services and foreign exchange earnings' (Seabrooke 2001:48). Subsequently, the dollar was transformed to world money in the end of the Bretton Woods and the 1973-4 oil crisis because the massive volume of dollar securities was further produced and traded through the issuance of substantial US government debts in the early 1970s and the petrodollar supply of the oil crisis (ibid: chapter 4).

His engagement with the complex relationship between direct financing and the development of the dollar provides an advanced understanding of the various aspect of the dollar. His account, however, lacks in the specific process of dollar creation necessary to finance the expansion of dollar securities. In other words, the socialisation of finance explains how different social actors are integrated into financial markets so that the financial integration provides an increasing source of fund to meet the demand of dollar securities, but it is not clear to explain where more money came from or how more money was created to finance the increasing volume of financial activities in first place. His answer probably rests on further socialisation of finance and financial innovations. The former was already explained to provide competitive advantage (a source of more capital) to US banks going abroad, whereas the latter was not specifically explained. The role of financial innovations was taken seriously

by Martijn Konings (2007, 2011), as are shown below.

More fundamentally, the conception of the dollar, for Seabrooke, seems *static* and *exclusive.* The numeraire status of the dollar, established at Bretton Woods, was regarded as the fixed and safe international medium of exchange, anchored on gold and to which other national currencies were valued. US banks were believed to take advantage of non-exchange risk in the international financial market. However, as Gary Burn and others observed, 'the Eurodollar market allowed the City's financiers to issue dollar liabilities and thereby share in the denomination rents' (Burn 2006: 10). It indicates that the development of the dollar as world money is in part attributed to foreign central banks and private banks. Seabrooke recognised the importance of US government debts but only at the end of the Bretton Woods system. The analysis of the public dollar needs to be taken further on the earlier development of the Eurodollar market in the 1960s. The static view of the dollar does not help us to understand the process of dollar development as not US exclusive but hybridised dollar process.

Seabrooke drew attention to the importance of US public and private securities, resulting in the expanding volume of dollar securities dealing and trading, exclusively advantaged by US banks. Indeed, it was clear that US banks had relative advantages of dollar securities trading. However, the dealing and trading of private securities is not the same monetary phenomenon as the dealing of US government securities, if the dynamic process of money creation is adequately understood in the US monetary system. For that matter, the rapid development of the Eurodollar market as the international interbank market required more than the externalisation of private dollar credit or securities. That is to say, there is a need to explain how the dynamic process of monetary creation in the US money and the Eurodollar market occurred to meet the ever expanding dealing of US securities. The static view of the dollar does not help us to understand the dynamic process of dollar development.

Similarly, Martijn Konings regarded the development of the dollar as world money as a consequence of the externalisation of a new institutional framework developed in the US market of the 1960s to the Euromarkets in the 1970s (2007; 2011). The new institutional development meant distinctively US financial practices, known as liability management strategies such as the issuance of CDs for example. US banks developed the financial capacity to create more liquidity by issuing negotiable financial instruments with the fixed capital base. The purpose of financial innovations not only created the dynamic nature of US finance and international finance but enabled US banks to circumvent regulatory barriers of the Federal Reserve by going abroad to the Euromarkets and bringing a new source of fund back to the US domestic market. Thus the institutional development created a monetary problem, inflation, for the monetary authority in the 1970s. The monetary problem forced the Federal Reserve to intervene in the domestic financial system as a whole, but its direct intervention created a new institutional configuration by sucking further money into the financial markets.

In a broad sense, Konings shares the idea with Seabrooke that the externalisation of distinctively US financial practices and relations to the Euromarkets created an institutional framework, US structural power, in which US banks were able to sell US debt effectively, and other banks were forced to follow US financial practices. They both regarded the growth of the Euromarkets as 'a consequence of the growing ability of American intermediaries to sell [US] dollar debt' (Konings 2008: 39; Seabrooke 2001: chapter 3). The institutional framework provided US banks with the effective sale of US dollar debt. What distinguishes them from each other is that the specific purpose of financial innovations, for Konings, offered a new source of money to expand dollar liquidity and but also to enable US financial intermediaries to circumvent regulatory restrictions of the Federal Reserve. Unlike Konings's understanding of the US state in a regulatory sense, Seabrooke recognised the active role of the state as a constitutive force of encouraging and developing the practice of direct financing.

It is commonly shared that the international rise of the dollar was assumed to result from the institutional externalisation in which US banks were able to sell their debts effectively to the Euromarkets. The institutional externalisation combined two distinguishable processes: the capacity of US banks to create dollar liquidity and the *incontestable* transferability of dollar debt issued to foreign customers and banks in the Euromarkets. In other words, the institutional framework assumes the smooth transferability from US financial debts issued to the same debts bought and resold to other foreign banks. To be precise, the institutional nature of the US financial practice or innovation was attractive and adoptable to foreign banks so that an expansion of financial globalisation could be explained. However, what US banks produced may not be necessarily attractive or transferable to other banks *unless* something more than the institutional practice was additionally explained. The *unproblematic transferability* of US financial debts between US banks and foreign banks requires, indeed, the essential characterisation of the dollar itself operating in the offshore markets. As Konings pointed out, US banks going abroad from the mid-1960s not only applied their financial techniques but also tapped into a new source of fund, non-resident dollars, in the Eurodollar market as well (2011: 111).

The third wave of the IPE provided nuanced interpretations of historical developments of the US dollar as world money by drawing attention to the process of new private institutional developments and their projection to the international realm. However, when they discussed the externalisation of US dollar debt sale, analytical engagement of characterising the dollar and dollar specification is not adequately placed. The externalisation of the US institutional development reflects the process of transforming the dollar into world money, accepted to the international financial markets: the transformation of master currency to top currency in Strange's term. Furthermore, what remains under-theorised in the third IPE wave is how the central bank involved the dynamic process of monetary creation both within the domestic market and outside it. As engaged with Seabrooke above,

the historical transformation of the dollar does not involve the exclusively American money attributed only to US banks, but a *shared* process of dynamic monetary development. The answer for why that is the case requires us to rethink about the different characterisation of the US dollar beyond the received conception of money (the dollar) residing in the sphere of (international) market exchange.

2.5 Conclusion

This chapter has extensively engaged with the evolutionary waves of IPE literature devoted to revealing various processes of the US dollar's development. Taken together, the three waves of IPE literature have shifted the analytical starting point for the study of the US dollar as world money from the political determination of money by the hegemonic state towards the power of financial markets and new private institutional configurations. The various trajectories identified by the IPE literature have indeed contributed to enriching our understanding of the US dollar as world money. The development of the US dollar is thus in part related to the various trajectory process such as the role of the state, financial markets and new institutional practices. This chapter stresses, however, that the different trajectories of IPE have not paid sufficient attention to what is the core constituent element of all the various trajectories: the dollar itself is money and its international rise has involved a number of highly significant developments that amount to a process of monetary transformation. As a result, key agents such as central banks have also not been appreciated by the IPE literature.

The transferability of the *private* dollar debt, conveyed by later US banks, requires two prior interrelated levels of monetary practice, associated with the development of the US dollar. The first one is the institutionalisation of the dollar as an international abstract measure of value, enabling the price of goods and services to be constructed and financial debts to be transferable in the international market. The dollar as an intangible measure of value has been practiced through international monetary institutions, in particular the operation of the European payment system in the 1950s, for

the settlement of inter-government credits and debts on the fixed gold price as expressed in the abstract dollar unit (Chapter 3). The international measure of value has since then provided the fundamental basis for the transferability of international financial debts and the subsequently developed distinctiveness of dollar production outside the US monetary space.

The other monetary practice is associated with the transformation of central banking practice in the process of the rapidly developing Eurodollar market in the 1960s. The placement of the US dollar as the US government debt by foreign central banks created the dynamic process of new dollar creation in which private Eurobanks actively participated since the public character of the dollar was one of the most sought debt available to them with the absence of reserves, and the transferability of the US government debt was made smooth and dynamic by the institutionalisation of the dollar abstraction (Chapter 4). The attractiveness of the US private debt, delivered by later US banks, was then subsequently integrated into the hybridised process of dollar creation, involving foreign central banks and international banks, including US banks (Chapter 5).

One further important point to be considered here is the constitutive role of the US central bank that the third IPE wave overlooks in the process of developing the dollar as world money. The two monetary practices just discussed above create the shared process of dollar creation, but do not necessarily transform the dollar into world money. In other words, the historical construction of the dollar as world money is further required to develop the capacity of the US central bank to cope with the rapidly expanding Eurodollar market and the US domestic money market as well. The direct intervention of the US central bank in the money markets eventually established itself as a global monetary authority over the Eurodollar market in the early 1980s (Chapter 6).

Without considering the underlying monetary developments of the Bretton Wood finance, the three waves of IPE literature are not complete to understand the rise of the US dollar as world money.

Nonetheless, when focusing on states, financial markets and new institutions, a number of IPE scholars have inadvertently provided important insights into monetary transformations that the analysis of the US dollar can explore. The various contours of dollar development by the IPE literature does contain important historical events relevant to the monetary transformation of the US dollar.

The importance of Bretton Woods institutions is recognised as a distinctive governance of the post-WWII global finance, as in the work of Benjamin Cohen, Robert Gilpin, Andrew Walter. This thesis takes the face value of Bretton Woods institutions as an important historical development with a different taste; it does not provide general understanding of those institutions. Rather, Bretton Woods institutions are characterised to reveal a distinctive emergence of the US dollar as an international measure of value. Reinterpreting Bretton Woods institutions helps to unearth their operating unit of account as the US dollar. Thus, the monetary side of Bretton Woods institutions is specified with reference to the US dollar as their operating unit of account that Keynes during the 1944 Bretton Woods negotiation was worried about special status of national money of account on the incoming International Monetary Fund. As Walter emphasised, European Payments Union in particular was a significant development towards the revitalisation of Western European economies by breaking bilateral trade and payments during the early Bretton Woods era. While the EPU was importantly recognised in the recovery of the European economy and towards a stepping stone for subsequently multilateral trade and payments after 1958, what enabled European claims and debts to be finally settled required the institutional practice of the US dollar as an abstract measure of value. The operation of the EPU was a crucial development of the US dollar and at the same time part of international monetary process. That is, the EPU was a key stepping stone for the emergence of other subsequent monetary developments such as the Eurodollar market.

With the recognition of the US dollar as an international measure of value, embedded in the operation

of international monetary institutions, the end of the EPU opens up the possibility of further development of the US dollar. The end of the EPU was closely linked to the development of the Eurodollar market. Scholars like Philip Cerny and Gary Burn emphasised the development of the Eurodollar market (the Euromarkets in a broad sense) as a distinctive development of global finance. The Eurodollar market is taken as a crucial development. But here, the Eurodollar market needs to be reinterpreted as a process of monetary development to help identify the role of key agents such as foreign central banks and their interaction with private commercial banks. The Eurodollar market is reconsidered in a way to develop the further character of the US dollar as transferable credit and debt relations. As Burn emphasised, the Eurodollar market was a crucial underlying mechanism of financial globalisation. The key underlying mechanism of financial globalisation contained the transferability of various dollars including US government debts and private bank debts, denominated in the dollar's abstract measure of value. The Eurodollar market thus provided a foundational monetary space for developing the dollar's dynamic credit and debt relations outside the US monetary space. That is, the Eurodollar market is not the entirely private monetary space but the hybridised process of US dollar creation, involving both US government debts and private bank debts. The development of the Eurodollar market is understood not as a financial expansion but as a dynamic process of monetary transformation. For this reason, the dynamic character of private US bank debts such as CDs, emphasised by Martijn Konings, is integrated into that monetary dynamics.

The end of the Bretton Woods system, emphasised by Susan Strange, Eric Helleiner, Randall Germain and Paul Langley, is importantly recognised as a key historical event of financial globalisation. The end of the Bretton Woods is, as in above historical cases, reinterpreted to reveal further developments of the US dollar. The end of the link between gold and the US dollar is specified to reveal not a privatised process of financial globalisation but an intensified process of the US dollar's transformation. To some extent the difference between the US dollar as an international money of account and different

representations of the US dollar (forms of the US dollar) was obscured. Understanding the event as a monetary process helps to clarify the historical moment of the full establishment of the US dollar as the so-called international reserve currency. That is, the historical event transformed the changing characteristics of US dollar to world money as world money of account and the world's high-powered money. The end of the Bretton Woods era thus gave rise to the intensified process of monetary transformation which gradually drew the US central bank to deal with the process of monetary transformation undertaking on the Eurodollar and US money markets.

Leonard Seabrooke recognised the crucial role of the US state as a constitutive force of the process of financial globalisation. The typical understanding of the (US) state is largely static against the force of financial markets, or passive in a regulatory sense, as shown in the work of many IPE scholars. Recognising the historically inherent link between the development of modern credit money and the development of modern state (2001; chapter 2), Seabrooke interpreted the adequate role of the state as an active actor as dynamic as private actors. Understanding the inherent role of the state helps to identify the active role of foreign central banks in the Eurodollar market. On the one hand, the role of foreign central banks was crucial to the development of the US dollar as dynamic credit and debt relations in the Eurodollar market. The role of the US state, the US central bank, on the other, is analysed as a constitutive component of dollar development in all historical events considered in this thesis. The US state was gradually developing its institutional capacity from the mid-1950s toward the end of the 1970s. Proper understanding of the Volcker Shock between 1979 and 1983 requires to identify the direct intervention of the US central bank *against* the money markets as the process of establishing itself as a world monetary authority. According to Samuel Knafo, 'the construction of liberal financial governance involved a process of state empowerment rather than a retreat of the state' (2013: 36). The construction of the US dollar as world money requires the establishment of the US central bank as a global monetary authority over the Eurodollar market in particular. The state is a vital

part of moneyness as it involves in the development of the US dollar as world money of account and the worlds' high-powered money.

The IPE scholars have provided the important study of key historical cases relevant to the development of the US dollar. They are fruitfully investigated to show changing characteristics of the US dollar. At the same time, the changing characters of the US dollar are demonstrated as the underlying key mechanism of global finance in subsequent chapters. Thus, the important historical events need to be analysed as a transformative process of dollar development. As developed in the previous chapter, the three essential features of money as the sovereign money of account, the transferability of credit and debt relation and the constitutive role of the central bank, are used to re-characterise the dollar in the next four empirical chapters from the 1944 Bretton Woods Agreement to the Eurodollar market in the 1960s, the end of the Bretton Woods system in the early 1970s and Volcker Shock between 1979 and 1983.

As the aforementioned IPE literature is drawn into the following chapters' account of how the moneyness of the US dollar was produced at the international level, it is important to acknowledge that the heterodox monetary school does not specify the processes that transform a national money into an international money. This is because the heterodox school primarily focuses on producing a characterisation of the relationship between money and the state within sovereign monetary space. Even though Ingham (2014), for example, provides a historical narrative of a dislocation between Roman money of account and various means of payment in the post-Roman period (pre-modern money), he does not provide a detailed process of how the essential characteristics of modern moneyness are established outside of a national monetary space. In particular and with reference to the contemporary period, it is especially notable that the heterodox school has not constructively engaged with the advent of offshore monetary space, developments that are arguably of considerable

significance to the capacity of a national money (the US dollar) to take on the three essential features of modern moneyness at the international level. Drawing on the heterodox school of money to understand the rise of the US dollar as world money is, then, a far from straight-forward task that cannot be accomplished without recourse to the IPE literature in order to further develop the heterodox approach to modern moneyness.

In order that the US dollar could be transformed and achieve the essential characteristics of moneyness at an international scale, the establishment of US money of account outside of the US required the operation of the international monetary institution of the EPU – alongside the emergence of the Eurodollar market. More specifically, in the historically unique EPU, European central banks practiced US money of account as an abstract measure of value for their credit and debt relations with each other, even though US dollars were not utilised to make payments. In this regard, the abstract dollar can be regarded as being 'detached' from various means of payment circulating within the US. At the international level, European central banks played an important role in the establishment of US money of account in the first place outside of the US. In the offshore Euromarkets, meanwhile, private banks practiced US money of account to produce actual credit and debt relations, linked to the particular role played by US government debts.

What can be seen, then, is that there are significant differences between the manner in which the moneyness of the US dollar developed at an international level and how the establishment of a sovereign money of account within a national monetary space is typically understood by the heterodox school of money. In a national space, sovereign money of account denominates different forms of money because it is directly payable to the state (final means of tax payment), whereas the initial operation of US money of account at the international level does not involve actual payments but provided for the abstract monetary calculations of European central banks. At the same time, however,

the international practice of US money of account through the operation of the EPU was not alone sufficient to produce the transferability of credit and debt relations across borders: that is, the second feature of moneyness. This required the dynamic process of monetary production in the international money market. The *full* establishment of US money of account as a dominant international measure of value also involved the actual issue and transfer of credit and debt relations through the market: the international money market.

For the US dollar to produce the dynamic transferability of credit and debt relations at the international level, the link between the practice of US money of account at the European central bank level and the actual production of credit and debt relations amongst private banks in the Euromarkets needed to be established. This link was created through the transformation of European central bank practice in the international money market. Unlike the practice of the abstract monetary calculation for the inter-governmental settlement in the 1950s, European central banks after the end of the EPU provided actual US government debts to the Eurodollar market through interaction with their respective national private banks. Thus, European central banks transformed US government debts to *new* US dollars, readily acceptable to international banks. This monetary transformation in the Eurodollar market established the private practice of US money of account in the issuing and transferring of newly created credit and debt relations among European banks. Transferable US government debt is foundational for the dynamic transferability of credit and debt relations at the international level. Eventually, with the breakdown of the Bretton Woods system, foreign central banks continued to accumulate US government debts which, in turn, intensified the offshore monetary transformation and reinforced the embedded practice of US money of account in the Eurodollar market.

What the foundational role of the transferability of US government debt again reveals, then, is that there are important differences between the manner in which the moneyness of the US dollar

developed at an international level and how the establishment of a sovereign money of account within a national monetary space is typically understood by the heterodox school of money. On the one hand, there is a clear similarity to the development of the features of moneyness in a national space, wherein the heterodox school stresses that the role of government debt is critical to integrating private credit into the fiscal system of the state. Likewise, US government debt is crucial to the monetary transformation of private credit creation in the Eurodollar market. The production of international credit and debt relations depends on transferable US government debt. On the other hand, however, unlike processes of national monetary integration, the production of dollar denominated international credit and debt relations did not have to be integrated into the fiscal system of the US state, but rather involved a process of monetary creation in the offshore monetary space. As discussed above, the role of European central banks in both the EPU and the accumulation of US government debt is critical to producing the international transferability of credit and debt relations across borders. This indicates that, as monetary practices evolve 'with regard to the demand made by states in pursuit of their own interests' (Ingham 2004: 109), the production of the essential features of moneyness at the international level is largely made by the process of pursuing the interest of European states, starting with the creation of the EPU to restore war-torn European economies and the implementation of their monetary policies through the buying and selling of US government debts.

In order that it is able to account for the transformations that realised the first two essential characteristics of moneyness for the US dollar, the heterodox school therefore needs to be elaborated upon to shift its analytical focus to developments taking place outside of US monetary space. The same can be said in relation to how the US dollar came to exhibit the third essential feature of moneyness that can be identified from a heterodox school perspective. It was the monetary transformations taking place beyond the US national monetary space and in the Eurodollar markets that, gradually and over time, drew the Federal Reserve into establishing itself as a global monetary authority over the

production of international credit and debt relations denominated in US money of account. The development of the Federal Reserve as a global monetary authority somewhat lagged behind the wider process of monetary transformation that gave rise to the world moneyness of the US dollar. Indeed, it was not an intention of the Federal Reserve to establish itself as a global monetary authority in the first place. Rather the way the Federal Reserve dealt with production of US dollar denominated credit and debt relations outside of the US were at the roots of its transformation from a lender of last resort in its own national monetary space into a global market maker of last resort from the early 1980s.

PART II

THE HISTORICAL ANALYSES OF THE RISE OF THE DOLLAR

Chapter 3 The US Dollar in the Early Bretton Woods Era

3.1 Introduction

Chapter 3 commences a historical analysis of the rise of the US dollar as world money by examining the early Bretton Woods era. The three essential features of moneyness – i.e. money of account, transferability of credit and debt relations, and the constitutive role of the US central bank - are utilised to investigate the specific dynamics of the US dollar during this period. This chapter thus attempts to disaggregate the dollar into three dimensions of moneyness and aims to identify which, if any, of these essential features the dollar could possess outside the US monetary space during this period. Drawing from insights of selected IPE contributions which regard the establishment of Bretton Woods institutions and, in particular, the EPU, to be an important mechanism of breaking European bilateralism and restoring European economy, this chapter reinterprets the significance of these institutions in relation to processes of monetary transformation that give rise to the international rise of the dollar. Interestingly enough, the massive amounts of US dollars injected by the US state into Western Europe did not contribute to developing any of the essential features of the dollar. This chapter not only disentangles the US dollar from the conventional image of quantitative US dollars flowing from the US, but unpacks a distinctive trajectory of the dollar's rise, embedded in the operation of Bretton Woods institutions as well. It provides a new story about the initial development of the US dollar during the early Bretton Woods period as constituting one of the four developments of the dollar as world money.

In the IPE literature, the rise of the US dollar during the early Bretton Woods era is generally characterised by the beginning of its role as the international medium of exchange lubricating international trade (Frieden 1987; Gilpin 1987) and its subsequent transformation to a key reserve

currency (Gill and Law 1988). The typical story of the dollar's international rise begins with the massive amount of US dollars injected into Europe in the form of Marshall Aid. The US government between 1948 and 1952 put $13 billion directly in Western European hands to finance US imports and rebuild European economies. It is believed that, as the injected US dollar helped European economies to recover through the expansion of production and trade, the US dollar played an intermediating role in facilitating international trade and thus turned itself spontaneously to a key international reserve currency. In this regard, the international rise of the US dollar is equated with its establishment as the principal international medium of exchange (e.g. Eichengreen 2011). The key essence of the US dollar begins as a medium of exchange and ends up comfortably with a store of value. As such, the historical process of the dollar's international rise does not require any further explanation beyond the smooth process of market exchange.

In opposition to the prevailing image of the role of the US dollar during the early post-war years as following from the processes of the real economy, Chapter 3 asserts that the beginnings of the role of the US dollar as world money are actually to be found outside the process of market exchanges during the 1940s and 1950s. The primary character of the US dollar during this period was not to facilitate international trade, but rather to measure inter-governmental credits and debts through the operation of Bretton Woods monetary institutions. That is, the US dollar as an international measure of value was partially nurtured from the 1944 Bretton Woods Agreement and was practiced through the EPU in particular, while the British pound played a dominant role in the international commodity markets. In the terms of the three essential features of moneyness, the US dollar as US money of account was added to the final version of the 1944 Bretton Woods Agreement. Thus, the international history of the US dollar began via the *official* channel of Bretton Woods institutions such as International Monetary Fund. The conventional image of the rise of US dollar, massively injected into European economies by the US state, did not play a decisive role in restoring the economy of Western Europe.

Rather, much of the given dollar returned back to the US market and produced further domestic US dollars. To be more precise, the injected dollar was not an international medium of exchange lubricating intra-European trade since it could not break bilateral trade and discriminatory monetary relations strongly held among European states. The multilateral trade and payments of the Bretton Woods system was not operational until the successful operation of the innovative EPU.

Put simply, the US dollar as an abstract measure of value began to be practiced through the operation of the EPU rather than the international commodity markets. The innovative nature of the EPU lay in the centralised clearing system that it instituted in which bilateral credit and debt relations incurred between two states were settled with other members in time lag. It did not require a large quantity of money to be used in the clearing mechanism. The EPU unit of account was used to settle cumulated credits and debts of EPU members on the fixed gold price, but the price of gold was expressed as the US dollar's abstract measure of value. The final net balance of EPU claims and debts was thus expressed by the shared US dollar unit. For excessive claims held by some members, actual payments were made in gold and US dollars, meaning that they both were denominated as US money of account. The first key monetary development of the US dollar during the early Bretton Woods time was thus the establishment of the abstract US dollar unit outside the US monetary space. Meanwhile, the US dollar did not come to exhibit the other two essential features of moneyness during the early Bretton Woods era. Transferable dollar denominated debt and the role of the US central bank did not gain traction outside of the US monetary space, largely due to restrictive Bretton Woods regulations such as exchange controls and the domestic orientation of the US central bank.

In the following, section 3.2 provides two brief explanations for the rise of the US dollar during the early Bretton Woods period in the IPE literature and explains why the process of the dollar's rise in their accounts is inadequately understood. The conventional view of the rise of the US dollar and of

its spontaneous transformation into an international reserve currency is challenged. The subsequent sections of the chapter move on to unpack the US dollar from a perspective of the three essential features of moneyness. Starting as US money of account in section 3.3, the analysis of the US dollar traces back to the 1944 Bretton Woods Agreement and ends up with the operation of the EPU in detail. The constitutive link between US money of account and the EPU is focused to disentangle the moneyness of the US dollar from the popular image of the US dollar as an international medium of exchange. In section 3.4, the second feature of moneyness – i.e. transferable credit and debt relations, denominated in US money of account – is addressed and shown to be largely absent for the dollar outside of the US national monetary space during this period. The final section 3.5 analyses the role of the Federal Reserve during the 1950s. Analysing the second and third features of the US dollar leads to an explanation of how the developments necessary to their establishment had yet to take hold.

3.2 Understandings of the US Dollar in the Early Bretton Woods Era

Two main features of the US dollar in the early Bretton Woods system are understood as either an international medium of exchange or a key international reserve currency in the IPE literature. The international life of the US dollar typically began with the fixed rate between gold and the US dollar as an international yardstick. The fixed value of the US dollar, anchored on gold, was regarded as a yard stick against which other national currencies were measured. The US dollar turned smoothly to an internationally safe medium of exchange in the process of restoring international trade. For instance, when a large quantity of US dollars was, through Marshall Aid, injected into western Europe, they served to 'revitalize Europe's struggling economies and to tie Western Europe together into a more cohesive economic and political unit' (Frieden 1987: 71). The Marshall Aid played a key part in restoring Western European economies by the use of the injected dollar in the expansion of their real economy. In this respect, the US dollar was seen primarily as an international medium of exchange in lubricating

international trade (Frieden 1987; Gilpin 1987; Gill and Law 1988). As international trade was expanded, the intermediating role of the dollar was naturally transformed to world money. The process of developing the US dollar is exactly identical with the purely economic characterisation of the dollar (e.g.Eichengreen 2011).

Others who did not regarded the Marshall Aid as a main reason for the dollar's rise found puzzling the monetary phenomenon: a shift from a dollar shortage to a dollar glut in the 1950s (Block 1977; Aglietta 1985). The internationalisation of the US dollar was, for them, closely linked with the dollar glut in the decade. The dollar glut needed to be explained; how Western European states earned a large amount of dollars. Aglietta recognised the importance of the EPU along with US government aid as to enable Western European states to work toward multilateral trade and payments. Thus, the expansion of the world economy led to the growth of the US dollar held in European hands (1985: 172). Whereas Block understood Marshall Aid as a failure to restore multilateral trade and payment systems and explained that the dollar glut of the 1950s, held by non-US residents, resulted primarily from the increased spending of the US government on rearmament (1977: 109-122). The channel of transferring quantitative US dollars shifted from Marshall Aid to the US government's military spending. But, the dollar was still seen as an intermediating role in the process of the real economic expansion.

The natural process of transforming the US dollar to world money, undoubtedly embedded in the process of international trade expansion, did not require any further reasoning to go deeper into other trajectories of the dollar's development. The essential quality of the US dollar as neutral medium of exchange led to the belief that the credibility of the US dollar came from its convertibility into intrinsically valued gold. Complex monetary processes of the US dollar were ignored for the sake of the fixed link between seemingly valuable gold and seemingly less credible dollar. Various monetary issues were reduced to the idea of the US state as a hegemonic power. For example, Gilpin (1987),

following exactly Cohen (1977), identified three monetary problems with international monetary stability: liquidity supply, adjustment and confidence so that the three monetary problems can be solved only by the idea of a hegemonic power which has an interest in maintaining international monetary order and forces others to follow the 'rule of the game' such as fixed exchange rates. The exclusive focus on fixed exchange rates not only ignored the complexity of credit and debt relations across borders but also overlooked the important role of public monetary authorities. Consequently, the natural development of the US dollar did not require the constitutive role of the state.

The other feature of the US dollar in this period is recognised as a key international reserve currency. Similarly, the dollar staring as an international medium of exchange was transformed to a key reserve currency during the 1950s (Gill and Law 1998). The transformation of the dollar from an international medium of exchange to a key international reserve currency was dependent on the credibility of the dollar itself. The creditability of the US dollar derived from its convertibility to gold (Cohen 1977, Gilpin 1987, Gill and Law 1988). This is exactly a mistaken idea of the commodity theory of money that the value of money should be attached to some intrinsic commodity. As discussed in Chapter 2, the characterisation of the US dollar fully established as a key international currency is an exaggeration because the reserve currency of the US dollar without the international money market can be viewed as *static* master currency in Susan Strange's term, which can be applied to the money of the Soviet Union as well.

In a conceptual sense, the idea of the US dollar as an international reserve currency is upheld to result from the economic functionality of money as store of value, as US government debts are accumulated in foreign central banks. But since the government debt, situated at the top position of pyramidal debt structure, is the most sought-after debt, denominated in US money of account. Thus, the government debt is the most transferable debt which can be held or sold easily in financial markets. Regarding the

government debt as a store of value seems doubtful to possess its conceptual value which can characterise the dynamic nature of the government debt. Therefore, it is not only inadequate to place the credibility of the reserve dollar on its convertibility to gold. But also, the smooth transformation of the US dollar as an international medium of exchange to the reserve currency obscures the very essential characters of the US dollar. The natural transformation of the US dollar should be denied, and the other features of the US dollar needs to be investigated and considered as part of monetary development, not dictated by the real economic process.

3.3 The US Dollar as an International Abstract Measure of Value

The US dollar as an international measure of value was, in part, established through international monetary institutions in the 1940s and 1950s. International monetary negotiations at the 1944 Bretton Woods conference did not have any name of national currency such as the US dollar in the operation of the IMF. Keynes had strongly rejected to granting a special status for any national currency in the IMF articles (Van Dormael 1978: 165). Before the 1944 Bretton Woods conference was finished, the name of one particular national unit of account, the US dollar, however, was secretly added to the final text of IMF agreements (Van Dormael 1978; Amato and Fantacci 2012). 'The par value of the currency of each member shall be expressed in terms of gold, *as a common denominator, or in terms of a gold-convertible currency unit of the weight and finess in effect on July 1, 1944'* (Van Dormael 1978: 201-202, emphasis original). Gold as a common denominator does not make sense since gold as a commodity cannot possess an inherent conception of money of account. It would be able to function as means of payment only if the price of gold is expressed as a state money of account. Thus, the gold-convertibility currency was referred to the US dollar which denominates the price of gold per ounce at $35. Therefore, the institutional setup of the IMF made possible the *official* emergence of the US dollar as an international measure of value for 44 national moneys of account and gold as the reserve of the

IMF. The US dollar played the role of a basic monetary unit of account in the operation of international monetary institutions such as the IMF and the EPU. Until the full operation of the EPU, however, the international measure of value was not granted the historical role to be played yet.

It seems doubtful that the economic recovery of European states was primarily attributed to an injection of a large amount of US dollars such as the so-called Marshall Aid. European trade during the late 1940s, in spite of IMF credits and US government aids, operated on the basis of bilateral trade and payments among many European countries (Triffin 1957; Rees 1963; Amato and Fantacci 2012). The supply of US dollars through Marshall Aid could not break European bilateralism. In other words, there was little room for the US dollar to fulfil an international medium of exchange. The monetary role of the IMF during the 1940s and 1950s was, furthermore, marginalised by direct monetary aids of the US state (Walter 1991; Germain 1997) and the role of the EPU (Triffin 1957). The Marshall Plan did not make a decisive contribution to the shift from bilateral to multilateral trade and payments in Europe. The Marshall dollar injection did not directly help to expand intra-European trade. Thus it did not change the monetary characteristics of the US dollar in the international context, rather contributed to the domestic expansion of dollar production within the US monetary space.

The Marshall Plan between 1948 and 1952 provided $ 13 billion in terms of grants and loans to Western Europe, which was traditionally viewed as rebuilding European economies and preserving political stability (Block 1977; Bordo 1993). Others such as Helleiner emphasised the monetary aspect of Marshall Aid and understood its main purpose as offsetting capital flight from Europe to the United States (Helleiner 1994: 58). The massive amount of Marshall dollars was compensated for 'the US failure to institute controls on inflows of hot money from Western Europe' since cooperative capital controls were not acceptable to the American banking community (ibid: 59-60). Unlike European countries which imposed extensive and restrictive controls on capital movements, in particular capital

inflows which tended to disrupt domestic monetary policy, the US did not prevent foreign capital from flowing into its financial markets in the postwar years (ibid: 64). The US financial market was the only market opened for foreign private capitals. While Marshall dollars may play an important role in reducing fluctuations of exchange rates, the Marshall dollar seems to perform differently in Western Europe.

The Marshall Aid possessed '*double-duty dollars,* serving to finance US imports and the recovery of European trade' (Kaplan and Schleiminger 1989: 17-18 emphasis original). Paul Hoffman, who led Economic Cooperation Administration (ECA), called Marshall Aid '*double-duty dollars* –used to pay for imports and to generate counterpart for local purposes besides the political aims of the Marshall Plan. The details of the ECA's recovery programme were left in the hands of European proposals. It was not a Pax Americana (Kaplan and Schleiminger 1989: 17). The Unites States could not enforce Western European states to pay only for US imports, but rather European states were encouraged to use the aid to develop intra-European trade (Walter 1991: 163-164; Amato and Fantacci 2012: 115). 'This was, after all, perfectly in keeping with the interests of the USA as a creditor to create the conditions for the debtor to get back to work, produce goods, therefore income, and eventually pay back the debts' (Amato and Fantacci 2012: 115). The Marshall dollar, despite its positive supports, failed to expand intra-European trade; in fact, many European countries, before the US government aid, had reached or exceeded 'their pre-war outputs with exception of Germany' (IMF 1947: 3, 1948: 2). Where did the huge amount of the US dollar go? Some of US dollars were clearly used to pay for US industrial imports. Some other dollars stayed in European central banks; according to the data provided by Triffin (1961: 6), there was an increase in dollar holdings of foreign central banks until 1950 and stagnated after that. But, it was not certain how much dollar reserves European central banks held during the 1950s. More importantly, financing the Marshall Plan involved the issue of new US government securities which in turn entailed the creation of private bank debts, as US banks purchased the government securities.

The Marshall Plan seemed to create more dollars in the US domestic monetary space, as the huge amount of US dollars, provided to European states, flew back to the US markets (Rueff 1971).

US dollars, entering Europe as part of Marshall Aid or foreign exchange earnings, were not fulfilling an essentially important role in measuring debts and producing debt contracts across borders. Inconvertibility between major European currencies prevented the operation of private debt markets whereby private banks could make profits by transferring debts, denominated in different national moneys of account, to others across borders. In other words, tight controls on foreign exchange markets dampened the international activities of private banks. Indeed, 'the Marshall Plan and other US foreign aid programs completely dwarfed, in the early postwar years, the rather modest flows of private investments abroad' (Triffin 1961: 33). Furthermore, many European countries, receiving US aids, were still implementing discriminatory trade relations on the basis of bilateralism (Block 1977; Solomon 1977). As a result, Marshall Plan aid did not succeed in fostering the growth of European trade and an open international trade. The solution to the problem of European bilateralism needed to be found in the innovative idea of the EPU.

The purpose of the EPU, signed in 1949, was to establish a Europe's centralised clearing centre in which each member country had one single account with 'separate records of the credits and liabilities deriving from trade with each of them' (Amato and Fantacci 2012: 116). The revolutionary nature of the EPU rested on the automatic offsetting of bilateral credits and debts of all EPU members. Each member's single account with the Union as a whole was settled by 'its overall position toward all of them taken together, regardless of the bilateral pattern of its earnings and expenditures' (Triffin 1957: 196). Each country was given a quota equal to '15 percent of its total trade with the EPU in 1949' (Eichengreen 1995: 171). As long as deficit countries did not exceed their quotas, they were granted credits to finance trade.

'The EPU system combined fractional gold payments with fractional credits in all intra-European settlements' (Triffin 1957: 170). Credits were granted by creditors for a certain proportion of its claims with the Union so that deficit countries did not need to pay fully in gold or US dollars (Rees 1963: 99). The clearing mechanism of EPU members' accounts was in two ways. The first one was associated with the compensation over time in which 'the monthly bilateral deficits and surpluses incurred by member countries in some months were cleared against surpluses they earned in other months and vice versa' (Kaplan and Schleiminger 1989: 130). The other clearing mechanism involved the multilateral compensation in which 'bilateral deficits are cleared through surpluses that the same countries earned in the same month in their payment relations with other countries' (ibid). Thus, the EPU clearing mechanism did not require the large volume of gold and US dollars in settling EPU claims and debts.

The clearing process of the EPU required the necessity of a common unit of account which measured EPU claims and debts. It was agreed that 'all accounts would be carried out in a special EPU unit, initially defined by a gold content equal to that of the 1950 US dollar' (Triffin 1957: 173). To clear the account of each member, the Bank for International Settlement as an agent for the OEEC 'converted into national currencies the claims reported by each pair of central banks. Then, it offset them to establish a net bilateral balance. The bilateral balances were converted into EPU units of account, each unit equal to the gold content of one US dollar at the par value of each currency to the dollar' (Kaplan and Schleiminger 1989: 92). Here EPU units of account meant US dollar units expressed in the fixed value of the gold. That is to say, the US dollar as an abstract measure of value was integrated in different US dollar units here. US dollar units enabled to establish 'each central bank's net monthly position *vis-à-vis* the EPU system as a whole' (ibid). The final net balances of all EPU members were calculated by the dollar abstract measurement. The final settlement of all EPU transactions among members was expressed as the US dollar unit (see Table 23 and 24 in Rees 1963: 190-192). The value of the EPU unit of account was fixed to the gold content of one US dollar. That is, the EPU unit of account would be

seen as a numerical accounting unit derived from the already existing exchange ratio between gold ounce and one US dollar. As far as the fixed value of gold to the US dollar did not exchange, the conversion of European national units of account into EPU units would not be problematic.

To be more concrete, the US dollar as an international measure of value was utilised in the process of actual gold or US dollar payments as part of the EPU's fractional payments. In particular, some countries like Belgium accumulated excessive claims so that they received gold and US dollars, expressed as US money of account (Triffin 1957: 203-204). Indeed, the European Payments Agreement stated that the EPU unit of account was defined 'in terms of whichever member currency remained most stable in the future in terms of gold (Triffin 1957: 173). However, it was not certain whose currency as a common denominator was defined. Since the EPU did not create a new international unit of account, it seemed extremely hard for final EPU settlements and payments to avoid the use of the numerical ratio between gold and the US dollar, initially established at the 1944 Bretton Woods conference. As the EPU was gradually coming into its final end in 1958, gold and dollar payments increased and expanded the role of the US dollar as an international measure of value.

Multilateral arbitrage facilities, introduced in 1954 as a revised version of the EPU, contributed to the consolidation of the US dollar as an international measure of value. Monetary arbitrages authorised private banks to 'deal in currencies' (Rees 1963: 157). The introduction of the monetary scheme profoundly changed the role of EPU central banks from passively handling foreign claims and payments to active role of stabilising exchange rates (ibid). As foreign exchange markets began to operate, EPU members obtained a certain degree of flexibility in measuring bilateral balances (Triffin 1957; Rees 1963), European currencies were dealt now by authorised private banks. The flexible degree of European national moneys of account tended to increase, but fundamentally against the gold-dollar parity. From a perspective of creditors, the demand for gold or US dollars as a means of payment

increased. The 1955 renewed EPU, called the European Monetary Agreement, provided provision of not credit but *loans*, 'for which *borrowing* countries would pay interest and service charges in gold (Rees 1963: 169, emphasis added). The European Monetary Agreement was expected to spontaneously replace the EPU, if a major member country like the UK or France did not want to comply with the multilateral compensation principle of the EPU. After 1954, the volume of gold and dollar payment had steadily increased (Kaplan and Schleiminger 1989: 131-132). The new monetary scheme encouraged individual members to possess a substantial degree of flexibility and at the same time to move toward the eventual convertibility of their currencies into the US dollar (ibid: 94). As more transactions were settled in terms of gold and US dollars, they as international means of payment were expressed as the US dollar unit. Consequently, the US dollar was in part established as an international measure of value through the operation of the EPU.

3.3.1 *International Commodity Markets*

From the end of WWII to the mid-1960s, British sterling rather than the US dollar played a dominant role in pricing commodities, trading through London markets in spite of its turbulence. London retained the international role of re-trading commodities throughout the world. After WWII ended, there was a great demand for primary goods such as rubber and sugar. British authorities turned to re-open London commodity markets which had been closed since 1939 (Clarke 1965). Starting with the rubber exchange market in 1946, various commodities, such as cocoa, raw sugar and grain, were coming to and traded through London from 1951 (Clarke 1965: 81-84). Re-opening of the commodity markets did not solve the monetary problem of inconvertibility between national currencies and sterling. The solution to inconvertible sterling was found on the idea of 'special exchange control arrangements, known as Commodity Market Schemes', which allowed certain goods to be transacted only in sterling and made exceptions to those commodities: 'cocoa, coffee, grain and raw sugar was

permitted solely on the understanding that when the commodity was bought for dollars it could be sold only for dollars' (Clarke 1965: 81). Certain dollar commodities were, therefore, traded for overseas customers. Residents in the sterling area were able to purchase most commodities, denominated in sterling, on the London markets.

The London commodity markets which constituted auctions and hedging facilities attracted international commodities to be priced in sterling. Pricing standardised goods such as wheat, tin and lead was negotiated; 'forward contracts could be entered into either sterling or any other currency' (Strange 1971: 65). The process of price negotiation opened up the profitable opportunities for commodity arbitrage in the financial market as well. A mechanism of pricing commodities such as metals in the US, was a direct relationship between large consumers and large producers rather than free markets (Clarke 1965: 84). The former mechanism invited volatile price fluctuations which undermined the confidence of the US dollar as stable money of account. Furthermore, the volume of commodity futures transactions like cooper was low in the New York market; after the official 1958 currency convertibility, the New York commodity market became very active, but with its arbitrage operation with the London market; commodity dealings, trading between the two metal markets, seemed to be done primarily in sterling (Donchian 1960: 135-137). Most foreign markets in the 1940s and 1950s were 'concerned mainly with domestic demand or domestic supply. The markets of London were overwhelmingly international, and in the variety of commodities' (Cohen 1971: 137).

British sterling rather than the US dollar denominated gold transactions in the most important international market in London, reopened in 1954. The operation of the London gold market was supervised by the Bank of England, and gold dealings were conducted only by authorised dealers; gold transactions consisted of 'the Bank of England, all Authorized Banks and four specialised bullion firms. Representatives of these four firms and two other bullion firms (which were also authorized banks)

meet daily and fix the price of gold in terms of sterling' (IMF 1954: 117). There were traditional goldsmiths since the Napoleonic wars: Matthey, Montagu, Rothschild, Pixley and Mocattsa which have long tradition of world-wide contracts and possess different market processing skills from refining to brokerage (Bank of England 1964: 7-8). The reopening of the London gold market meant that residents in the sterling area had free access to the market, and non-residents, participating in the market, 'had to pay with special sterling called registered sterling. It was a way of keeping the market open and at the same time maintaining a closed circuit of gold and American dollars in order to protect the pound' (Clarke 1965: 60). 'Purchases and sales against foreign currencies require[d] specific permission from the Bank of England' (IMF 1954: 118). The London market offered 'the cheapest commission rates available' and a relatively stable price (Bank of England 1964: 8). London was attracting more suppliers and purchasers. From the mid-1950s, European central banks actively participated in the gold market, and other gold suppliers such as Canada turned to the London market; indeed, the London gold market constituted 'no less than 80 percent of all the fresh supplies of gold of the world' (Clarke 1965: 57-58) since main gold supplies such as Australia and South Africa were part of the sterling area. 'The London commodity market continued to throw off foreign competition, even though periods of severe stress' (ibid: 83).

The US dollar in the early Bretton Woods era was partially established as an international measure of value through the operation of the EPU in particular, not much involved in pricing commodities as discussed above. British pound despite its vulnerability obtained a larger proportion of world trade throughout the 1940s and the 1950s. For example, 50 percent of international trade was denominated in British sterling in 1945, whereas 30 percent in 1967 (Dam 1982: 152). The US dollar played the abstract role of the basic monetary unit in settling final transactions of all EPU members. That is, the US dollar was practiced as a way of measuring final claims and debts of EPU members. Subsequently, the introduction of multilateral monetary arbitrage allowed EPU member countries to enjoy a

substantial degree of flexibility and at the same time increased the central tendency of the gold-dollar parity in the transferability of European currencies. The US dollar's abstract measure of value was practiced through the operation of the EPU along with the dollar area, including Central America and some South American countries (Triffin 1957).

3.4 The US Dollar as Transferability of (US) Credit and Debt Relations

During the early Bretton Woods period, the US dollar as the capacity to transfer US debts beyond the US monetary space could be understood in two ways: US government debts were held in foreign central banks, and US private debts, earned primarily from international trade and services, were accumulated outside the US monetary space. Some of them would return to the US money markets. Most of the US private debts earned would be turned to foreign central banks since foreign exchange earnings were not transferable, and most countries imposed tight monetary controls on foreign exchange earnings in the restrictive nature of the Bretton Woods monetary system (Helleiner 1994). With the imposition of extensive exchange controls and inconvertibility among major state moneys of account, the US dollar as transferability of debts beyond the US monetary space was extremely restricted until the emergence of international money markets in the 1960s. Before the occurrence of the historical event, the international transferability of the US public and private debts seems, at least, to require convertibility between the US dollar and European currencies.

Foreign central banks did not find urgent reasons for accumulating US dollars. Autonomous domestic economic policies were implemented without disruption of speculative capital flows, exchange rates were stabilised, and inconvertibility was continued. European central banks participating in the European Payment Union were discouraged to accumulate US dollars, even though they increased monetary reserves as a whole, but more gold than US dollars. The characterisation of the US dollar seen as a key international reserve role is an exaggeration. More importantly, as discussed above,

considering the US dollar an international reserve currency required the important role of international money markets where US government debts could be bought and resold to private banks across borders. The dynamic process of the international money markets is discussed in the next chapter. Given the almost non-existence of international money markets during this period, the US dollar as the transferability of credit and debt relations meant to operate only through the mechanism of tight exchange controls and international monetary institutions such as the IMF, World Bank and the EPU. The constitutive link between the US dollar and international monetary mechanisms was found on the EPU since its contribution to the development of intra-European trade and the foundational basis for the 1958 convertibility. The turn to the EPU stemmed from the 1947 failure to establish convertibility between British sterling and the US dollar.

3.4.1 *The Failure of the 1947 Sterling Convertibility*

The failure of sterling convertibility threatened to destroy the possibility of stimulating international transferability of private debts in the US dollar and British sterling, even though extensive exchange controls were in place. Given the 1946 US loan agreement to help sterling convertibility to the US dollar, the UK government agreed to 'complete arrangements under which the sterling receipts from the sterling area would be freely available for current transactions in any currency area without discrimination' (IMF 1947: 36-37). The country, receiving foreign exchange earnings in sterling, was now free to use it as a means of payment for goods and services from any other country. Indeed, the official objective of sterling convertibility was to establish 'a system of multilateral payments' (IMF 1947: 37) to facilitate international trade expansion in the context of many bilateral trade agreements in the early postwar era. The wider use of sterling and the US dollar would ultimately lead to international trade transactions conducted in terms of transferable national currencies. But, a substantial degree of exchange controls would be still imposed; 'exports and imports were still subject

to license, and control was exercised over capital movements and the large sterling balances' accumulated since the war' (IMF 1948: 30-31).

The political interpretation of the 1946 Anglo-American loan agreement and the failure of the 1947 sterling convertibility was seen as the conscious plan of the US state to penetrate the markets of the sterling countries (Block 1977: 65; Strange 1971; Burnham 1990: 49). As mentioned above, trade and exchange controls on capital accounts were tightly imposed. As the attitude of the US state on Marshall Aid indicated, the main interest of the US intended to promote multilateral trade and payments arrangements, which were believed to be beneficial both to the US and European states in the long term. On the monetary aspect of the event, the Bank of England wanted to reobtain the international primacy of sterling and aimed to 'prevent New York from taking over the bulk of foreign exchange transactions pending the reopening of a London foreign exchange market' (Schenk 2010: 61), as the British central bank negotiated supplementary monetary agreements with various European central banks in terms of acceptance of sterling and transferability of sterling balance to third countries (ibid: 60). It is clear that the mutual interests of the two countries could be met by promotion of multilateral trade and convertibility of their sovereign moneys of account, stimulating transferability of public and private debts across borders. The complete disaster of sterling convertibility in 1947 destroyed the possibility of re-establishing 'traditional patterns of private international financing in London and New York' (Helleiner 1994: 52) and led many countries to maintain bilateral trade arrangements and to keep tight exchange controls. Some 200 bilateral trade and payments were negotiated among European countries during the late 1940s (Kaplan and Schleiminger 1989: 13). Countries with convertible currencies remained only a few: the US, Mexico, El Salvador, Guatemala and Panama, which altogether accounted for about 10 percent of Europe's total export (Triffin 1957: 91). There was little room for the US dollar or British sterling to play freely beyond the dollar or sterling area.

3.4.2 *The US Dollar and the EPU*

As discussed above, the US dollar did not play an international medium of exchange in expanding intra-European trade due to the nature of the European multilateral clearing system. More specifically, the second feature of the US dollar as transferability of (US) credit and debt relations beyond the US monetary space found little room to play in the EPU. Indeed, the US initially provided a working capital of $ 350 million to launch the EPU (Strange 1976: 35; Solomon 1977). Since then, the operation of the EPU did not require the working capital to increase because the EPU prevented any credit country from accumulating gold or US dollars and prevented any deficit country from falling deeply into payment problems by granting credit. There was no room of the US dollar to be accumulated greatly, even though some countries like Germany increased US dollar holdings in foreign exchange reserves.

In the process of settling excessive surpluses or debts beyond quotas, once quotas were exceeded, settlement with the European Union was made in gold or US dollars (Triffin 1957; Rees 1963). The UK as a deficit country, for example, 'made $ 588 million in gold payment to the Union in 1952' (Rees 1963: 127). 'Accumulated claims could be converted into commodities or hard currency' (Eichengreen 1995: 172). In this case, credit countries like Belgium and Germany asked their excessive claims to be settled in gold or US dollars so that they could increase a certain level of monetary reserves as a whole. But the degree of monetary reserves compared to the expanded volume of intra-European trade was not significant.

Throughout the 1950s, foreign holdings of US government debts consisted of a very small percentage of the total US government debt. 'Only 2.1 percent of the debt was held by foreigners' (Hager 2013: 121-122). Whether the foreigners were foreign private actors or foreign central banks were not distinguishable. According to the data, offered by Meltzer (2009: 34), there was a very mild increase of US government debts at hands of foreign central banks in the 1950s. It is not certain how much

foreign private actors or foreign monetary authorities held US government debts, but what is clear though is that foreign holdings of US government debts were very small. This fact is also reflected on the domestic orientation of the Federal Reserve's monetary policies. Since European economic recovery did not lead to dramatic holdings of US government debts, but an increase in their monetary reserves. The increase was more gold rather than US dollars. The former no longer provided vital monetary roles such as liquidity, as international money markets rapidly developed after the 1958 currency convertibility (Triffin 1961: 8).

The EPU managed the credit and debt balance of each member's account by imposing limitations on both creditors and debtors (Toniolo 2005; Amato and Fantacci 2012). For example, the Netherlands' surplus by 1952 was so large and therefore was asked by the EPU to implement expansionary monetary policies, reducing its surplus (Toniolo 2005: 338). The European Union allowed countries to 'use their trade surpluses with one country to purchase goods from another country' (Block 1977: 100). Therefore, countries with surplus were discouraged to accumulate monetary reserves such as gold, British sterling or the US dollar. They were encouraged to liberalise trade further with others beyond the EPU code of liberalisation (Amato and Fantacci 2012: 117). Thus, 'more than three fourths of $ 32 billion of surpluses and deficits incurred over the years 1950-56 was cleared through multilateral and cumulative offsetting, leaving only 25 percent of net surpluses and deficits to be settled' (Triffin 1957: 202).

The success of European economic recovery thus did not require the monetary feature of the US dollar as the transferability of dollar-denominated credit and debt relations. It was so successful through the cooperation of European central banks on the basis of the centralised clearing union at the absence of foreign exchange markets and of private banks. The success of European trade led some earnings to an increase in their monetary reserves in terms of gold and US dollars during the 1950s (Triffin 1961

and Solomon 1977). Recovering European countries did not aim to accumulate US dollars. 'The revival of European trade did not depend so much on *injection of liquidity* in the form of [US]dollars' (Amato and Fantacci 2012: 116) but rested on the clearing mechanism which prevented the dependence of EPU members on any particular national currency. The innovative idea of the EPU was drawn from Keynes' Clearing Union without an international currency, *bancor.*

3.5 The US Dollar and the US State

The relationship between the US dollar and the state is focused on the development of the Federal Reserve's monetary policies, in particular with debt management. The Federal Reserve was subordinated to the Treasury during the Bretton Woods era. The US Treasury was primarily responsible for managing international monetary affairs such as exchange rate and international balance of payments (Helleiner 1994; Underhill 1994). The Federal Reserve was placed as a secondary role in focusing domestic economic issues such as full employment and price stability (Meltzer 2009: 26). The monetary policy of the Federal Reserve was committed to 'fix the price of government securities' (Friedman and Schwartz 1963: 621). The open market operation of the Federal Reserve was designed to maintain 'orderly conditions in the Government securities. This involved the continuation of a general level of prices and yields of Government securities which would support the Treasury issuing rates on Treasury certificates and long-term Treasury bonds' (FOMC 1949: 89). The Federal Reserve supported the price of government securities at fixed levels of interest rate, and it also helped to have the fiscal policies of the US government to be indirectly felt on those rates (Friedman and Schwartz 1963: 12-13). Therefore, Keynesian fiscal policies rather than monetary policies were guided to maintain social aims. The sudden 1950 Korean war, however, led the Federal Reserve to purchase a large amount of the government bond and to increase market prices (ibid: 621). In this situation, the Federal Reserve wanted to end fixed interest rates on the government security.

The dispute between the Federal Reserve and the Treasury on fixed rates reached the 1951 Accord, which freed the wartime obligation of the Federal Reserve from financing WWII at low interest rates (Axilrod 2011: 26). But, there were still the legal ceiling on the interest rate - 4.25 percent at which 'the Treasury can issue marketable securities with a maturity of more than five years' (Friedman and Schwartz 1963: 635). After the 1951 Accord, the Treasury supported the government bond market by 'paying whatever interest rate was required, rather than holding down the rate' (Axilrod 2011: 28). The support of the Federal Reserve for financing government securities at low prices was officially abandoned. It was seen in the postwar era as a turning point of formal independence of the Federal Reserve from the Treasury; its independence was reduced to *flexible* interest rates. Independence of the Federal Reserve from the Treasury did not mean necessarily that the former could disregard debt management (Meltzer 2009: 84). Apart from war financing, in peaceful times, the Federal Reserve is able to implement a broad scope of monetary policy, independent from the Treasury. In a fundamental sense, however, they are required to cooperate to manage government debt because the maintenance of creditable government debt is foundational to the transferability of modern credit money in particular bank credit money, as discussed in Chapter 1. The process of producing modern credit money is shared between the state and the banking system through the central bank. Therefore, modern credit money is hybridised money. The exact position of the Federal Reserve, for example, between the state and the banking system is not necessarily fixed.

During the second half of the 1950s, there was an on-going debate on whether the bills-only policy was appropriate as the main purpose of open market operations between the Federal Reserve System and the Federal Reserve Banks, in particular the New York Reserve Bank. At the meeting of the FOMC in March, 1953, one important provision was included in operating procedure: 'under present conditions, operations for the System account should be confined to the short end of the market (not including correction of disorderly markets)' (FOMC 1953: 88); the short end of the market meant that

the open market operations of the Federal Reserve would be conducted with regard to Treasury bills, whose maturity was one year or less (Axilrod 2011: 32-33). Since September 1953, the policy adopted was continued until February 1961 and known as bills-only policy (ibid: 634). The Federal Reserve argued that restricting its operations to short-term government securities would improve market forces and prices, determined by supply and demand as the Federal Reserve intervened less with the securities markets. Its purchase of government bills would not have an impact on the short-term security markets because 'the effects of purchases or sales in any part of the market are transmitted very rapidly to all other parts' (Friedman and Schwartz 1963: 634). Against this rational, critics argued that restricting its operations to Treasury bills necessary determined 'the structure of rates'; in other words, the bills-oriented operations would have an effect on credit conditions of the banking system and general economic activity (Meltzer 2009: 259). From a Federal Reserve's perspective, the bills-only policy could have an effect on the amount of monetary base, 'high-powered money, which was determined by the size of open market operations not by the kind of securities bought and sold' (Friedman and Schwartz 1963: 635). The Federal Reserve was denying the possibility of the policy effect on economic activity. In fact, it did not provide a convincing explanation for the rise in interest rates since the bills-only policy was adopted (Meltzer 2009: 259).

The real issue behind the debate was about where to place responsibility for debt management between the Federal Reserve and the Treasury. The bills-only policy could not impose a limitation on what the Federal Reserve and the Treasury could do jointly, despite the existence of the legal ceiling -4.25 percent- on interest on government securities (Friedman and Schwartz 1963: 636). For example, if monetary authorities wanted to increase monetary base by reducing the amount of existing long-term securities, the Federal Reserve, given the bills-only policy, would need to buy Treasury bills instead of long-term bonds, sell 'the same amount of long-term securities and use the proceeds to retire long-term securities'; in this case, the bills-only policy attributes responsibility of the debt

maturity to the Treasury and creates flexible short-term rates (ibid: 634). Against the bills-only policy, the New York Reserve Bank, sided with most economists and Congress, opposed the bills-only policy. Finally, the bills-only policy was brought to an issue in the presidential campaign. As John F Kennedy opposed the bills -only policy, it was dropped in 1960 (Meltzer 2009: 68).

The Federal Reserve did not develop a systemic relation between monetary policy and long-term monetary objectives. There was a lack of agreement among Federal Reserve policymakers on how monetary policy worked and a lack of interest on understanding monetary policy. For example, Governor Sherman Maisel admitted 'the absence of agreement on basic features of the relation between Federal Reserve actions and goals' (Meltzer 2009: 254). Federal Reserve policymakers met every three weeks and issued a directive to the manager to his actions until the next meeting. But they were primarily concerned with short-term changes. Since there was no agreed framework of interpreting data, its operations were based on largely a matter of guess or judgement and trial and error (ibid: 257). Guidelines for the monetary policy of the Federal Reserve were based on so-called free reserves: 'the difference between the banking system's excess reserves and borrowing from the Fed' (Axilrod 2011: 35). The Federal Reserve used free reserves as a policy target so that it did not consider the link between monetary base and money supply. Monetary growth between the banking system's reserves and their transformation into money was not taken as an important monetary policy. The emphasis on free reserves as a policy operation could be understood by New Deal regulations on the US financial markets such as a strict distinction between commercial banks and investment banks and controls on domestic interest rates. In other words, the transferability of private debts was limited across different financial sectors in the US. As pointed out above, the bills-only policy, though lasting during the 1950s, did not develop the depth of the US government debt market. The sophisticated monetary policy making of the Federal Reserve was not developed. The 1950s clearly showed the underdeveloped capacity of the US central bank to understand the effect of monetary policy on

monetary conditions such as money supply and economic activities in general.

3.6 Conclusion

The three essential features of moneyess, developed in Chapter 1 and elaborated through selected insights from the IPE literature in Chapter 2, have been applied to the historical characterisation of the US dollar in the early Bretton Woods era. In opposition to the conventional image of the US dollar as either an international medium of exchange or a key international reserve currency, this first analytical chapter has asserted that the international emergence of the US dollar was closely associated with the distinctive character of the US dollar as an intangible monetary feature. The first key development of the US dollar was international measure of value, initially nurtured from the 1944 Bretton Woods Agreement and actually practiced through international monetary institutions, in particular the EPU. That is, the US dollar was used to measure European governmental credits and debts and to produce a monetary means for the final settlement of their multilateral credit and debt relations in the 1950s.

The successful recovery of European economies did not require a large quantity of US dollars coming from the Marshall Plan. It was rather based on the innovative idea of the EPU in which the compensational nature of credit and debt relations among EPU members was centralised. Bilateral claims and debts were accumulated into a single account settled with the Union as a whole. Thus, the virtue of the EPU aimed to prevent any credit country from accumulating a particular national currency and to prevent any debt country from falling into deep payment problems. It worked well toward the monetary tendency not to require international liquidity in the transferability of European currencies between central banks. In this regard, the US dollar was did not play a role as an international medium of exchange in restoring intra-European trade.

The final settlement of all EPU claims and debts, collected from all EPU members, was expressed as

the dollar unit. The European Payments Agreement did not specify what an EPU unit of account would define since the fixed value of gold to the US dollar guaranteed the value of European monies of account. Initially, European national monies of account were used to measure their bilateral credits and debts. The convertibility of bilateral credits and debts into one single account per each member required the commonly shared US dollar unit. Furthermore, excessive claims, held by some countries like Belgium, were paid in gold or US dollars. Gold and US dollars were expressed as the US dollar as US money of account. For these reasons, it could be feasible to argue that the US dollar was established as an EPU unit of account (Bordo 1993: 43). In other words, the dollar as an international abstract measure of value was in part established during the 1940s and 1950s.

The other aspects of the US dollar found little room to play. The second feature of the US dollar as transferability of credit and debt relations was completely lacking in the absence of international money markets. Tight Brettton Woods regulations like exchange controls constrained the transferability of private bank debts. The operation of the EPU did not produce much in the way of international liquidity. In this respect, the US dollar as US government debts seemed static without the presence of international money markets. The US central bank as the third essential feature of the the moneyness of the US dollar also had no role, since its monetary policy was domestically oriented. The US central bank did not have an agreed framework of interpreting data and considering the important linkage between monetary base and money supply. The central bank was unable to understand the effect of monetary policy. Therefore, the only essential feature of moneyness developed by the dollar outside of the US national monetary space during the 1940s and 1950s was US money of account. For the US dollar to be an international reserve currency actually requires the dollar to further develop the second essential feature of moneyness, a development that does not take hold until changes in the international money market in the 1960s. The further development and monetary transformation of the dollar is discussed in the next chapter.

Before moving on to Chapter 4, it is necessary to further and briefly clarify the precise relationship between the EPU and the Eurodollar market in the rise of the US dollar as world money. The relationship between the EPU and the Eurodollar market did not centre on the *actual* production of credit and debt relations at the international level. That is, the EPU itself is not necessarily foundational for the dynamic development of the Eurodollar markets in which US dollar denominated credit and debt were created by private banks. Rather, the relationship between the EPU and the Eurodollar market can be understood as one of transition in the monetary practices of the US money of account, wherein the operation of US money of account as a measure of value was extended from the practices of European central banks to public and private banking at the international level more broadly. Crucial to this transition was the end of the EPU itself, and process of Eurodollar creation in which European central banks began to place US government debts with their banks operating in the Euromarkets. That is, the process of transforming US government debts to new dollars in the Euromarkets necessarily constituted the broader and wider practice of US money of account across public and private authorities at an international level. The US dollar no longer provided only for the measurement of the bilateral creditor and debtor relations of the European states, but for newly created creditor and debtor obligations at an international scale.

Chapter 4 The US Dollar in the Euromarkets in the 1960s

4.1 Introduction

As previously argued, the development of the first essential feature of the dollar outside the US monetary space – as an international measure of value – originated at the 1944 Bretton Woods conference and was then put into practice with the establishment of the European Payments Union. Meanwhile, the other two essential features of the US dollar – the transferability of credit and debt relations, and the constitutive role of the US central bank – were yet to be meaningfully developed during the 1940s and 1950s. Crucially, the US dollar as an abstract measure of value was used primarily for the final settlement of European intergovernmental claims and debts rather than for pricing commodities. The initial development of the US dollar as a world currency was therefore based on the internationalisation of the dollar as an international money of account.

This chapter continues the historical analysis of the rise of the US dollar as world money by examining the growth of the Eurodollar market throughout the 1960s. Drawing on the insights of selected IPE contributions which emphasised the growth of the Eurodollar market as a key development of global financialisation, this chapter reinterprets the process of Eurodollar market development in relation to the ongoing monetary transformation of the US dollar and its emergence as a world currency.

The existing IPE literature has provided three main explanations for the development of the Eurodollar market. The first is based on autonomous market processes, and emphasises the way in which private banks responded to the restrictive nature of Bretton Woods regulations (Swoboda 1968; Einzig and Quinn 1977). In a second, related, strand of literature, the development of the offshore money market is primarily seen as a result of a wider corporate profitability crisis in the US economy (Versluyen 1981;

Arrighi 1994; Palan 2003). Lastly, a third strand moves beyond narrow economic explanations in favour of emphasising the political dimension of the development of the Euromarkets, arguing that the Eurodollar and Eurobond markets should be perceived as part of a wider political process. This perspective shifts the focus to the role played by American and British monetary authorities in encouraging their private banks to operate in the offshore market, and highlights the mutual interests of private banks and public authorities in developing the offshore market (Strange 1976; Helleiner 1994) – whereas the development of the Eurodollar market is seen as an expansion of exclusively offshore private monetary space in which private banks are able to operate independent of the regulation of states (Burn 2006).

In moving beyond such conceptualisations of Eurodollar market development as being a consequence of changes in the financial markets or of politically driven regulations, this chapter argues that the rapid expansion of the Eurodollar market during the 1960s was underpinned by a monetary transformation: cross-border transferability of dollar-denominated debt. That is, the establishment of the US dollar as international money of account, embedded in international monetary institutions (as discussed in Chapter 3), was combined to produce a historically unique process of US dollar production in the Eurodollar market. The practice of US money of account measured and transferred the public character of the dollar – US government debts – outside the US monetary space. In this regard, as European central banks began to place US dollar reserves, US government debts, in the Eurodollar market, foreign central banks transformed the public character of the dollar to private dollars, widely acceptable to international banks active in the Eurodollar market. This monetary transformation was foundational for the subsequent transferability of bank credit money such as CDs. Foreign international banks began to issue debt, denominated in US money of account, in the offshore market.

The US dollar developed its capacity to transfer credit and debt relations across borders. In the

monetary process of the dollar's development, the transformation of foreign central bank practices, in particular, created a historically unique process of US dollar production outside the US monetary space. US government debts, placed directly by European central banks or through their respective commercial banks, produced new US dollars in the Eurodollar market. The public character of the US dollar as US government debts was transformed into private dollars, transferable among international banks, including US banks. Furthermore, new hybrid monetary transformations such as London CDs, in particular, contributed to the dynamic process of Eurodollar production. The underlying mechanism of the expansionary Eurodollar market was dependent on the monetary development of the US dollar as embodying the transferability of credit and debt relations, denominated in the abstract dollar, across borders.

With respect to the other essential feature of the US dollar as world currency, the Federal Reserve did not play a decisive role in the monetary process of the Eurodollar market during this period. The US central bank focused on consolidating its institutional authority against the Federal Reserve Banks, centralising decision-making power and conferring it upon the Board of Governors. Indeed, the Federal Reserve began to manage the feedback effect of capital outflows on the US market in cooperation with the US Treasury, and it developed currency swaps with foreign central banks as part of managing the external value of the US dollar against the dynamic process of the Eurodollar market. Nonetheless, neither the Federal Reserve nor the US money market played an important role in the monetary development of the US dollar. The dynamic process of Eurodollar market expansion during the 1960s was distinctively underpinned by the monetary development of the US dollar as cross-border transferability of dollar-denominated credit and debt relations, involving not only US actors and transferable US private debts, but also foreign central banks, foreign banks and US banks in the multidimensional transferability of US public and private debts. The rapid development of the Eurodollar market is, throughout this chapter, reinterpreted as a monetary development of the US

dollar.

Section 4.2 surveys the main narratives of Euromarket development within IPE and reveals what has been under-theorised: the underlying monetary process of the Eurodollar market. Starting with a conceptualisation of the Eurodollar as the US ordinary dollar, Section 4.3 draws attention to a structural monetary change which gave rise to the stimulation of private debt transferability and the resurgence of central bank monetary policies. The section explains how the US dollar's abstract measure of value can be further expanded with reference to the role of foreign central banks and US government debts in the Euromarket. Indeed, the practice of the abstract dollar unit is closely linked to the inner process of Eurodollar production since the process of creating debts necessarily requires a state money of account in the first place, and the transferability of debts issued in the state money of account expands its scope (as far as the debt transfer does not require another state money of account). In this regard, transferability of dynamic credit and debt relations, denominated in the abstract dollar unit, reinforces the power of the US dollar as international measure of value. Section 4.4 demonstrates that the transformation of central bank practices contributed to the second key monetary development of the US dollar: its capacity to transfer credit and debt relations across borders. The central assertion there, and in this chapter, is that the underlying mechanism of the development of the Eurodollar market was the monetary transformation of the dollar in the light of central banks' practices and new hybrid monetary transformations. The final section 4.5 discusses the gradual development of the Federal Reserve, regarding the international development of the US dollar and the centralising power of the Federal Reserve Board against Federal Reserve Banks.

4.2 Understandings of the Euromarkets

In economics, the development of the Eurodollar market was seen as a natural or autonomous phenomenon of private market activities (Swoboda 1968). With no central bank to think of, the private

actor's choice of the Eurodollar was ultimately determined by the size of the country's foreign transactions and the volume of its external trade (ibid: 10). In other words, the larger the volume of trade transactions, the lower the costs of the use of a particular currency related to the transactions, for example in foreign exchanges. Simply put, the cost of using a particular national currency determines its scope in the international market. The simple reason why foreign banks issued dollar liabilities was that they wanted to share denomination rents, such as the lower transaction costs of carrying assets and borrowing exclusively accruing to the US banks (ibid: 13–14). The development of the Eurodollar market was thus seen as 'a means of distributing a part of denomination rents and some of the gains from denomination seigniorage to the residents of outer countries' (ibid: 14). Similarly, Einzig and Quinn (1977: 19) also agreed that the most important benefit of using the Eurodollar was the higher yield. To be fair, the economic benefit of using the issuance of US dollar liabilities was in part constitutive of the rapid Eurodollar market development, but, as discussed in Chapter 3, the received image of the US dollar during the 1940s and 1950s did not play an intermediating role in lubricating international trade. The nature of using the US dollar for real economic transactions was not a priority and was only made possible after the US dollar as international measure of value was practiced through Bretton Woods official channels. Viewing the development of the Eurodollar market as a market distribution of the US dollar denomination rent largely misses the dynamic process of Eurodollar creation in which central banks played an important part.

Similar to the private market process, the Euromarkets were believed to be a product of the crisis of the real US economy. The Euromarkets, rather than the Eurodollar market, were developed by conflicts or contradictions rooted in the process of the US's real economic production (Versluyen 1981; Arrighi 1994; Palan 2003). For example, the crisis of US business profitability led US companies to seek an alternative funding source in the Euromarkets in the late 1960s (Arrighi 1994; Palan 2003: 13). The

markets provided them with a source of low-cost financing for their production and trade in Europe so that the rise of the international markets was seen as a new phase in the internationalisation of American business and corporations. The determinate link between the Eurodollar market development and the process of commodity production and trade indicates that the former is understood as subordinated to the process of real economic production and trade. Money does, of course, play an important role in financing production and trade. Money conceptualised mainly in the process of real economic expansion, however, leads to *monetary expansion* not *monetary development*. What needs to be emphasised is that the process of monetary development is not determined by the process of production and trade, as was discussed in Chapter 1.

Distinguished from the narrow economic explanations, a second narrative concerning the growth of the Euromarkets perceived the former as primarily political in nature. The growth of the Euromarkets was believed to result from the promotion of UK and US monetary authorities (Strange 1976: Helleiner 1994). The turning point for the wide use of Eurodollars was associated with the British government's regulation on sterling for financing international trade in the non-sterling area in 1957 (Strange 1976: 180; Versluysen 1981: 23–24; Helleiner 1994: 84). The market demand for foreign dollars was then met by the dollar supplies of American banks and corporations responding to US government regulations such as Regulation Q and the Interest Equalization Tax (Strange 1976). The development of the Euromarkets was primarily seen as a market response to the monetary authorities' regulations on the use of national currencies (pounds sterling and US dollars). The varying interests of the US and UK states pushed private actors into operating out of their own monetary space. Helleiner (1994: 83–91) specified the states' interest in supporting the Eurodollar market and the Eurobond market: the Eurodollar market provided the UK with the means to reconcile the Keynesian welfare state and the restoration of London as an international banking centre; and the Eurobond market provided the US with a way to finance its balance of payments deficits without painful domestic adjustments and at

the same time supported and made a space for American banks and corporations in the context of tightening capital controls. In his interpretation, it seems that the states produced the non-regulated monetary space in which private banks were encouraged to operate because it was in their own interest to do so – the offshore monetary space benefited them all. With regard to the development of the Eurobond market, it seems hard to disagree with Helleiner in a broad sense. However, difficulties arise when analysing the growth of the Eurodollar market as the market's response to state regulation, because the 1957 sterling crisis did not lead to a significant use of US dollars (Higonnet 1985: 39; Schenk 1998: 223). More importantly, US dollars supplied by the US market were not the only primary source of Eurodollars, even though the growth of the Eurodollar market was an important contributor to US deficits (Klopstock 1968).

Burn (1999; 2006) made the convincing argument that the Bank of England could not impose limitations on the liquidity position of London banks while receiving foreign dollars and relending them in the process of developing the Eurodollar market. Through foreign dollar activities, the London banks were able to create an offshore monetary space in which no national authority could impose any regulations. In Burn's interpretation, the Eurodollar market was designed by London private banks in order to establish private monetary governance independent of regulatory politics. Yet, regarding the Eurodollar market as a completely private monetary space is an exaggeration: even though Eurodollars are of their very nature operating outside any national banking regulation, they are cannot be completely private. The Eurodollar cannot be entirely separated from the US state because, as discussed in Chapter 2, money in different forms or representations requires the most essential feature of moneyness, money of account. In this sense, the Eurodollar shares the essential feature of US money of account, the US abstract denomination, with the US ordinary dollar in the US. Decisions of Eurobanks about investment across borders is completely private, but the transferability of their money is underpinned by the fundamental nature of moneyness: US sovereign money of account.

Thus, the development of the Eurodollar market or the Euromarkets necessarily involves the role of public monetary authorities.

What the existing literature has not paid enough attention to is the monetary process of Eurodollar market development and the specific monetary role of the central bank. The development of the Eurodollar market has not been theorised with regard to the monetary transformation of the US dollar as a key mechanism of the Euromarket's development in a general sense. Helleiner (1994) recognised the important role particularly of the US state in developing the Eurobond market, but he did not engage sufficiently with the constitutive role of the central banks in developing the Eurodollar market. On the other hand, Burn (1999) and Schenk (1998) drew exclusive focus on the role of private banks in developing the Eurodollar market. Indeed, it is clear that the Eurodollar market, as Schenk and Burn argued, originated from innovative private banks. While this chapter does not intend to contribute to the literature on the Eurodollar market's origins, it seems extremely difficult to contend that the initial market state could be autonomously developed without a dynamic source of US government debts. This chapter's engagement with the Eurodollar market literature is thus intended to provide a new interpretation of the dynamic nature of the Eurodollar market by paying attention to the practice of central banks with regard to their dollar holdings. What the IPE literature has shared is that in the early 1960s, central banks played an important role in the Eurodollar market (Klopstock 1968; Yeager 1976; Higonnet 1985; Burn 2006). The constitutive role of central banks in the development of the Eurodollar market has not been taken into serious consideration.

Indeed, Helleiner and Burn contributed to enriching understandings of the development of the Euromarkets beyond the narrow economic explanations. The regulatory transformation, however, does not allow to conceptualise the dynamic process of the Eurodollar market as a monetary transformation of the US dollar. That is, it provides little space to characterise the Eurodollar beyond a

medium of exchange or exchangeable commodity. It is, therefore, vital to situate the three essential features of the US dollar within the central analysis of the Eurodollar market expansion. The conceptual framework saves the US dollar from being sucked into the sphere of market exchange and entails the underlying process of Euromarket expansion as encapsulating the changing characteristics of the US dollar. For this reason, the Eurodollar market development can be understood as a monetary process in which the moneyness of the US dollar as a global currency was further developed as it gained the capacity to render credit and debt relations transferable across borders. Before going into the actual analysis of the Eurodollar from the three dimensions of moneyness, it is necessary to offer a more precise definition of the Eurodollar in order to clarify how Eurodollars are related to US ordinary dollars.

4.3 The Eurodollar and US Money of Account

Swoboda (1968) defines Eurodollars as dollar deposits at non-US banks regardless of the location of the banks in the US or in the foreign country. His analytical focus on transactions between 'original lender' and 'final borrower' through the intermediation of a commercial bank led to 'a series of chains along which the deposit of an original lender is transferred to a final borrower via the intermediation of commercial banks' (Swoboda 1968: 2). The bilateral relationship between lender and borrower does not tell us much about the complicated transferability of money between creditors and debtors. Furthermore, there is no real distinction between the US money market and the Eurodollar market as seen in a simple bilateral transaction. In a similar way, Einzig and Quinn (1977: 8) asserted that Eurodollars were distinguished from US domestic dollars in that Eurodollars are re-deposited with a foreign bank. In other words, 'dollars re-deposited in Europe were just ordinary dollars in the US, interchangeable with other dollars' (ibid). What was new was that Eurodollar transactions revealed different interest rates from those prevailing in the US market due to interest arbitrage between the

two markets (ibid: 62). But the mere fact of a price distinction between the Eurodollar and the ordinary US dollar does not reveal anything about the relationship between the two.

Other contributors to the IPE literature shied away from direct engagement with conceptualising the Eurodollar (Strange 1976; Helleiner 1994; Palan 2003; Burn 2006). Market before money, in their perception. The lack of interest in defining the Eurodollar indicates that Eurodollars are not distinguishable from US ordinary dollars. On the other hand, Amato and Fantacci (2012) engaged in constructive analysis of the Eurodollar. For them, Eurodollars, starting with dollar credits held outside the US monetary space, were not subject to US jurisdiction. They argued that the Eurodollar can be seen as an international currency distinct from US dollars *on the condition* that dollars, flowing out of the US market, did not make their way back home (ibid: 105). In the early 1960s, the US Treasury viewed Eurodollars as US capital, but the Treasury's view on the Eurodollar changed later on as the growth of the Eurodollar market reduced pressure on the US deficit (Burn 2006: 150). The changed view indicates that the Eurodollar was not entirely seen as the US debt. Indeed, there was always the possibility of interchangeability between the Eurodollar and US ordinary dollars. In the late 1960s, US banks operating in the Eurodollar market brought Eurodollars back to the US money market; in this case, the Eurodollars flowing back home were seen as US debts. But if Eurodollars continued to stay outside of the US monetary space, they would be distinguished from US ordinary dollars.

Reflecting on the heterodox tradition of monetary thought in Chapter 1, money as sovereign money of account also means to include *final* means of payment in the national monetary space. US dollars operating within the US monetary space mean sovereign money of account and, at the same time, *final* means of payment, enabling the purchase of socially produced goods and services which in turn pay taxes to the US government. US ordinary dollars and Eurodollars share the fundamental feature of moneyness as US sovereign money of account, so they are the same money in this sense. However,

Eurodollars do not share the other side of US money of account – *final* means of payment – which is possible only in sovereign monetary space. National taxes are attached to the use of US ordinary dollars, but Eurodollars are freed from paying taxes in the offshore monetary space. In other words, they are not *final* means of payment, but US sovereign money of account operating in denominating international goods, services and debts; they also operate as means of payment. In the national monetary space, the distinction between *final* means of payment and means of payment is crucial in distinguishing money from credit (Ingham 2004a; Amato and Fantacci 2012) because the hierarchical money structure is key to money production and money management. The Eurodollar, which, however, operates as a means of payment and shares US sovereign money of account, appears as a blurring of money and credit (Amato and Fantacci 2012: 106).

As Amato and Fantacci noted, if Eurodollars continued to stay outside the US monetary space, they would be viewed as a distinctive international currency – to the extent that, from the late 1960s, the Federal Reserve attempted to distinguish the governance of the US money market from the Eurodollar market. The impact of the dynamic Eurodollar market was, however, strongly felt in the US money market, as during the late 1970s the international market tended to grow faster than any national money market. The Federal Reserve intervened directly into the international and US money markets. The Eurodollar sharing the fundamental moneyness of US money of account could not avoid the radical monetary policies of the Federal Reserve. Eurodollars, though operating in the offshore monetary space, were seen to be managed indirectly by the Federal Reserve as part of maintaining the credibility of the US dollar in terms of US stable money of account. Therefore, it is fair to say that the Eurodollar is the US dollar.

The fact that the Eurodollar is the US dollar in terms of its commonly shared dollar denomination indicates that the transferability of debt contracts denominated in the US dollar could be expanded,

as non-US banks issued debts denominated in the US dollar and therefore joined the denomination rent. In particular, when central banks placed their dollar holdings in the Eurodollar market, this monetary practice created a hybridised process of further dollar debt production involving foreign and US banks. The inner monetary processes of the Euromarket's development are closely linked to expanding the scope of US money of account and to the dynamic process of US dollar debt creation and transferability. The dynamic process of dollar debt transferability required one structural change which stimulated the international activities of private banks and the resurgence of central bank monetary policies.

4.3.1 The 1958 Convertibility

The European countries decided to convert their currencies into US dollars for non-residents at the end of 1958. The European currency convertibility involved the liberalisation of exchange controls on current account transactions and stimulated the activities of private actors and central banks. Except for Iceland, Spain and Turkey, all the OEEC countries introduced official current account convertibility, and Germany and Belgium allowed it in capital accounts (Toniolo 2005: 345). Many European countries liberalised restrictions on US imports (Rees 1963: 260). The introduction of external convertibility was not only limited to Europe; fifteen other countries – including Australia, Burma and India – linked with a Western European country and took steps to liberalise their exchange controls as well (IMF 1959: 125). Their markets were now integrated with the free exchange markets of the eight countries, including the US and Canada, creating an integrated international money market (ibid). Additionally, this monetary development encouraged South American countries to give up their tendency to multiple exchange rates (ibid: 5). The larger part of world trade and payments was carried on in convertible currencies.

External convertibility had a significant impact on the international monetary system. It expanded the

geographical scope and monetary activity of the private actor. It spelled the end for the EPU, through which intra-European claims and debts were settled through the accounts of central banks. International trade and payments were now made through foreign exchange markets. The close of the EPU in 1958 required IMF members to 'avoid restrictions on current payments, multiple exchange rates, and discriminatory currency practices' (Rees 1963: 262). The European Fund, which replaced the EPU in terms of supplying short-term credits to members experiencing payment problems, managed stable exchange rates of European currencies and settled claims in *US dollars* (Toniolo 2005: 343–344). Private actors were now able to sell foreign earnings to foreign exchange markets for better interest rates or deposit them in any other foreign exchange market that they found profitable. Non-residents were now able to draw foreign currencies in their accounts and to use the proceeds of the exports in any parts of the world (IMF 1959: 4). The expanded scope of private actors' freedom with their money facilitated the process of unifying foreign exchange markets. The Eurodollar market was expected to receive more private dollars from different parts of the world since non-residents were now able to draw any currency from their accounts and able to 'use the proceeds of the exports in the world' (ibid: 5).

It is clear that the introduction of official convertibility contributed to the development of the Eurodollar market from 1958 onwards. As Burn (2006) and Schenk (1998) pointed out that the initial stage of the Eurodollar market operated on *given* foreign dollar deposits in the 1950s, the monetary change was somewhat limited to current account transactions rather than capital account. External convertibility did not apply to capital transfers and also did not establish the right of the resident to purchase foreign currency. However, there was a fundamental difficulty of distinguishing between current and capital accounts in bank operations (Helleiner 1994: 51), seemingly suggesting that banks in the Eurodollar market were freed from regulatory distinction between current and capital accounts. As discussed above, countries like Germany and Belgium allowed convertibility on capital account so

that 'the German public now had complete freedom in all its foreign exchange transactions' (IMF 1959: 127). In these favourable conditions, private banks increased their holdings of foreign exchange, in particular the US dollar; in 1959, the commercial banks in countries other than in the US 'increased their balances in the US by $1.4 billion, compared with an average degree of some $200 million per year in the preceding decade' (IMF 1960: 5). The increase in private holdings of foreign exchange reserves could stimulate massive shifts in their distribution, with special and far-reaching effects on the shaping and execution of monetary and debt management policies in the various countries (BIS 1959: 60). At the end of 1962, $13 billion as foreign exchange reserves were held in the world outside the US and the sterling area (Triffin 1966: 102).

4.3.2 The Expansionary Scope of US Money of Account

As discussed in Chapter 1, sovereign money of account enables debt contracts to be transferable and the price list of commodities to be constructed. The fact that the Eurodollar shared US money of account enabled debt contracts to be transferred through the offshore money market. The Eurodollar, for example, was believed to represent various types of US debts: US Federal Reserve notes, US government securities and private dollar deposits. All these debts were denominated in US money of account. The debt comprising US Federal Reserve notes and US government securities were usually placed in the monetary reserves of foreign central banks. The debt comprising private dollar deposits was a dominant form of the Eurodollar which could be a short- or long- term debt depending on what kind of transaction took place. *New* Eurodollar creation seems *limited* to re-depositing from one bank to another primarily in order to take advantage of interest-arbitrage opportunities. The 'economic significance of these successive redeposits is confined to the fact that they make for a rapid and efficient transmission of short-dated funds to banks that are in a position to employ dollar balances for end-use purposes' (Klopstock 1968: 4). There was no dynamic change in Eurodollar maturities in

those transactions between international private banks, and therefore short-term borrowing and lending in the interbank market could not affect the reserves of Eurobanks.

There were, however, different Eurodollar transactions enabling the production of *new* Eurodollars if monetary authorities were involved in the transaction, or if Eurobanks made Eurodollar loans to nonbanks and so the loans did not flow into the US monetary space. That is to say, when central banks participated in the Eurodollar market directly, or indirectly through their commercial banks, the dynamic process of new Eurodollar creation was uniquely placed in the offshore market. Central banks, in particular, as active monetary actors interacting with their commercial banks, contributed to the rapid development of the Eurodollar market. The various links between central banks and commercial banks will be discussed in Section 4.4 with regard to the US dollar as transferability of credit and debt relations. Here, the focus is on the direct involvement of monetary authorities.

Not only did central banks provide the Eurodollar market with an important source of US dollars, but their practice of placing a dynamic source of US government debts transformed the nature of dollar transferability as well. That is, US government debts, directly placed by foreign central banks, created a process of maturity transformation at Eurobanks and thus produced new dollar liquidity in the Eurodollar market. Indeed, central banks in 1962 held more than two-thirds of all Eurodollars, with commercial banks, private businesses and individuals accounting for the remaining third (Altman 1963: 57). 'Some central banks in western Europe and elsewhere are believed to have placed dollars from their reserves . . . much of the money was placed in the Euromarket during 1960–61' (BIS 1964: 132). Identifying the dollar's exact form is complex: they could be either short-term dollar deposits or dollar assets such as US government securities. In March 1962, the Bank of International Settlements received 300 million dollar deposits from central banks in different continents and placed a large proportion of them with commercial banks active in the Eurodollar market (Altman 1963: 58). Not only

did central banks in surplus countries place US dollar reserves, but central banks in deficit countries borrowed Eurodollars as well. For instance, UK local governments had been 'important borrowers in the London Eurodollar market' (Bank of England 1962: 220).

US government debts placed directly by central banks in the Eurodollar market may have been marginal in the early 1960s, but the important point is that central banks had begun to place some of their dollar reserves in the Eurodollar market. This monetary practice, as central banks' dollar accumulation was intensified towards the end of Bretton Woods era, subsequently ensured that emerging financial globalisation would be dependent on the operation of the US dollar as world money (Chapter 5). The US government debts could be renewed or negotiated or divided into new debt contracts. The expansion of debt contracts could be denominated in different sovereign moneys of account or US money of account – the latter enabling its own expansion in the process of transferring debts through the Eurodollar market. When US government debts were purchased by private banks with dollar deposits in the Eurodollar market, it created *new debts in US money of account* like the Federal Reserve's open market operation in the Eurodollar market (Niehans and Hewson 1976). In the national banking system, if the central bank either sells *new* government securities to the private sector or buys *existing* government securities from the private sector, both of the open market operations permit a possible increase in the supply of credit money through increased monetary base. Unlike the national banking system, the Eurodollar market does not have a mechanism of national banking reserves at the central bank due to unregulated reserve requirements at Eurobanks. US dollar reserves placed by foreign central banks were not new, but were rather existing government debts already issued. The sale of existing US government debts would not permit an increase at the reserves of Eurobanks.

How was it possible that the placement of US government debts created new Eurodollars? The process

of new Eurodollar creation in this case was not a matter of deposit-multiplier money creation but a process of liquidity creation. That is, the purchase of US government debts, as the most transferable debt, could lead to maturity transformation at Eurobanks. '[W]henever a central bank invests dollar holdings in 3-month Eurodollars, it creates liquidity for the nonbank sector in the same way as the Federal Reserve buying 3-month Treasury bills in the open market, or as a commercial bank, investing excessive reserves in short-term assets' (Niehans and Hewson 1976: 15). From the monetary aspect of the 1960s, 'the creation of ever-increasing international liquidity, [was] primarily in the form of central bank reserves' (Toniolo 2005: 352). The creation of Eurodollars in interaction with central banks and Eurobanks expanded the scope of debt contracts in terms of US money of account. More significantly, new Eurodollars were created by the indirect participation of central banks through the intermediary of their commercial banks.

4.4 The Eurodollar and Transferability of Credit and Debt Relations

Swap operations between central banks and their commercial banks provided a new dynamic source of US dollars to the Eurodollar market. There were various domestic reasons for central banks to provide their commercial banks with US dollars. European central banks in surplus countries attempted to reduce official foreign exchange reserves, whereas central banks in developing countries tried to earn higher interest rates on dollar deposits (Klopstock 1968: 2). Other central banks in deficit countries wanted to borrow Eurodollars in order to meet domestic needs such as loans for production processes. Swap operations were initially beneficial to European surplus countries and their commercial banks. For example, in the early 1960s, the Deutsche Bundesbank sold US dollars to German banks and foreign banks' branches, and in return received German Marks; the US dollars were used to 'increase their earnings and improve their portfolio of investments' (Altman 1963: 56). In 1959, the Bank of Italy, concerned with Italian commercial banks holding a large amount of foreign currencies

given the high domestic liquidity, employed swap operations, 'selling dollars for lire at the prevailing rate and offering forward cover at the same rate' (Altman 1961: 340). The purpose of the swap transactions was to halt monetary expansion and reduce official dollar reserves (ibid). The benefits of swap operations were not always reaped by the central banks.

One of the most puzzling things about the Eurodollar market was how *new* Eurodollars were produced as central banks interacted with their respective commercial banks in dealing with US dollar reserves. When central banks placed dollar deposits with their commercial banks or provided dollar deposits through swap transactions, those dollars were deposited in the Eurodollar market and flowed back to their origin. In 1960, Germany was experiencing continuous dollar inflows. The Bundesbank implemented various policies, such as discriminatory reserve requirements on dollar deposits held by foreigners, to reduce official reserves. When this did not succeed, the central bank provided favourable dollar swaps to German importers through German commercial banks, so as to encourage them to borrow US dollars from the Bundesbank itself. Neither did this work, leading eventually to the revaluation of the Deutsche Mark on 6 March 1961 (Yeager 1976: 496–497). As Paul Einzig explained:

> The German monetary authorities, by supplying the Eurodollar markets with dollar deposits through the intermediary of German banks, increased the difficulty of their own task in resisting the pressure for a second revaluation. In fact, they initiated and maintained a vicious circle when lending their unwanted dollars to the German banks, and, through them, to the Eurodollar market, for much of the self same dollars were sold by the borrowers against D. Marks, so that they found their way back into the Bundesbank's reserves, only to be re-lent to the Eurodollar market through the German banks. (Einzig 1977: 85)

Unwanted dollars, initially provided by a central bank through its commercial banks active in the Eurodollar market, were available for relending to borrowers who would convert them into their home

currencies. Thus, the dollars could come back into the reserve of central banks and be deposited again in the Eurodollar market (Yeager 1976: 435). Other European surplus countries, such as the Netherlands and Switzerland, also experienced the flow of unwanted dollars in the early 1960s (BIS 1962). If dollar deposits supplied by central banks stayed within the interbank market, the chain of dollar deposits from one bank to another would not necessarily produce *new* money (Klopstock 1968; Machlup 1970). Dollar deposits supplied by central banks were loaned to nonbanking businesses through the intermediary of their own commercial banks operating in the Eurodollar market. It seems likely to produce *new* Eurodollars. (More details on this case of new Eurodollar production will be dealt with below.)

Other countries such as Italy and Japan actively borrowed Eurodollars. In the early 1960s, the Bank of Italy encouraged Italian commercial banks to vigorously borrow Eurodollars for the purpose of 'financing the deficit of external payments without loss of official gold and dollar reserves' (Higonnet 1985: 36–37). The Japanese authorities held substantial dollar balances with Japanese commercial banks in order to facilitate the expansion of bank lending (BIS 1964: 132). Thus, the central banks intensified the market demand for the Eurodollar. Furthermore, from the mid-1960s, the Federal Reserve often intervened in the Eurodollar market by activating its swap line with the BIS, which in turn was an important supplier of dollars to the Euromarket (Klopstock 1968: 21). The central banks' direct and indirect participation in the Eurodollar market for various domestic and international monetary reasons not only produced *new* Eurodollars but supplied US dollars. From 1966, when international doubt about the promised link between gold and the US dollar increased, the participation of central banks through their own commercial banks or international institutions was intensified. The Eurodollar market experienced a rapid growth (BIS 1967: 138–145), while the process of US domestic dollar production was restricted. The rapid growth of the Eurodollar market reveals more than an *allocation of US ordinary dollars*; that is to say, *new* Eurodollars were produced and

reproduced. To a considerable extent, the Eurodollar market had been promoted by European monetary authorities 'in the making of their monetary policies' (Burn 2006: 142).

The possibility of Eurodollar creation by 'Euro' commercial banks cannot be ruled out. According to Burn, 'for the Eurodollar market to become a true offshore market, dollars had to be deposited and re-lent outside the jurisdiction of not only the US banking system but of all national banking systems' (2006: 26). Eurodollars had to be not simply allocated by US banks but created by Euro commercial banks. The Eurodollar market does not produce Eurodollars in the same way as the deposit-multiplier process in the domestic market (Klopstock 1968). If Eurobanks lend to nonbanks new loans denominated in the dollar, Eurodollars in the Euromarket as a whole may increase or decrease, depending on what kind of transaction is carried out. If the transaction leads to a net outflow of the Eurodollar banking market to any of the national banking systems, including that of the US, Eurodollars are not produced but reduced (Machlup 1970: 227). There are, however, a range of possible scenarios for Eurodollar creation: i) if Eurobanks made dollar loans to 'nonbank residents of countries other than the US who use them for payments to firms or persons keeping dollar deposits with banks or branches of banks' within the European countries; ii) if holders of nondollar balance convert them into US dollars deposited with European banks; and iii) if dollars purchased by European banks from their own residents are not resold to the central bank, but made loans to nonbank residents of the European countries, not to the US residents (Machlup 1970: 254–256). In these cases, and dependent on Eurodollars not flowing back into the US money market, Eurodollar creation could be made possible. Thus, in the 1960s, new monetary developments contributed to the dynamic process of the Eurodollar market development.

Two important monetary developments, the Eurobond and London CDs, transformed the Eurodollar market into a truly international money market. The creation of the Eurobond market proved to be

crucial to US and UK authorities. The US Treasury actively promoted it as, after 'Eurodollars began to be utilized to provide finance for long-term investment in Europe in early 1963' (Burn 2006: 150), the Eurobond market would reduce long-term capital outflows (Helleiner 1994; Burn 2006; Battilossi 2009). The Bank of England declared its support for the restoration of London as 'an international entrepot financial hub' (Battilossi 2009: 14) by providing favourable conditions such as low stamp duties and no withholding tax (Kerr 1984: 19).

In the early stage of the Eurobond market, the anonymity of bondholders was highly valued, and a primary desire of bond investors was tax minimisation and evasion (Kerr 1984: 19–20). A significant proportion of all Eurobond issues denominated in US money of account was placed in Switzerland (ibid: 20). 'The most important distinguishing feature of the US dollar denominations over all others [was] the lack of control by any monetary authority over the use of the currency for the purpose of denominating international bonds' (Quinn 1975: 50). Complete freedom of the US dollar denomination seems to indicate the use of Eurodollars as US money of account outside the US monetary space. Indeed, at the outset, Eurobonds were purchased primarily by continental European investors since British and US residents were not allowed to purchase foreign securities denominated in foreign currencies (Battilossi 2009: 32). Indeed, the US government imposed interest equalization taxes on the purchase of foreign securities by domestic residents (Quinn 1975: 50). It seems more likely, then, that the Eurodollar and the Eurobond market would have developed in conjunction. For instance, issuers of Eurobonds such as large corporations could 'keep the proceeds from the bonds on interest-paying dollar accounts with European banks until they use them for payments for direct investments to payees who again hold dollar balances with European banks' (Machlup 1970: 225). Moreover, 'the European banks that underwrite these bond issues need to maintain a pool of dollars in case they have to take up securities that the market cannot promptly absorb. It is probable that this pool of dollars tends to grow over time and that part of it is kept in the Eurodollar market' (BIS 1966: 142). US

corporations deposited a major part of the proceeds of their Eurobond issues in the Eurodollar market in 1966 (BIS 1967: 145)

The negotiable certificates of deposit, launched in 1961 by the First National City Bank under the permission of John Saxon, Comptroller of the Currency, made a significant contribution to the monetary process of the Euromarkets through making the transferability of credits and debts issued in the US dollar possible. In particular, CDs issued by commercial banks contained the transformative capacity of financial assets. That is, CDs performed as a general means of payment, debt settlement or transferability, *and* at the same time were negotiable financial assets, although the transformability of CDs was not fully developed until the government regulation on bank deposits was lifted in the early 1970s. (Chapter 5 discusses how CDs contributed significantly to the US money market and the Eurodollar market during that time.) During the 1960s, CDs were not immediately used in the US domestic market for purchasing goods and services – like deposits in a checking account – but they were, like time deposits, used and accepted by the nonbank public and commercial banks as well. Unlike a time deposit, though, the CD was negotiable and could be turned to liquid cash within two days (Einzig and Quinn 1977: 32). In the US it meant that 'the dollars are held by the depositor who, having re-lent them to the American bank, has recovered its possession through the sale of the certificate in the secondary market' (ibid: 33). In other words, the issue of CDs in the US banking system was likely to produce monetary expansion through the *double use of the same dollar.* The tradition of fractional reserve banking was shifted to liability management. US banks were able to make more loans with fewer reserves.

London dollar CDs, which were authorized by the Bank of England in 1966 (Quinn 1975: 39), were a crucial monetary development in making the Eurodollar market more appealing to nonbanks and nonfinancial corporations. The use of the London dollar CDs, as Burn (2006) argued, inevitably reduced

the international role of British sterling, indicating a further fracture between the national currency and the City of London. In May 1966, the London branch of the First National City Bank issued the first negotiable dollar-denominated CD. From that point on, international corporations were attracted to London CDs because they provided 'a more liquid and appealing investment instrument' (Dufey and Giddy 1994: 212). Therefore, the funding for London dollar CDs was obtained with longer maturities (ibid). 'By the end of March 1968, 11 US banks and 15 other banks had issued CDs and a secondary market had developed' (Bank of England 1968: 158). With the removal of the withholding tax in 1968, there were neither US taxes on the issue of London CDs nor UK stamp duty on 'the transferability of the certificates for purchase or repayment' (Dufey and Giddy 1994: 215). London CDs attracted new dollar deposits from international investors, and Eurobanks were enabled to make dollar loans to nonbanks. In this process, more Eurodollars were produced with extended deposit maturities. The international money market was now 'open to a wider public' (Burn 2006: 29).

Indeed, there is no doubt that the actions taken by British private banks and the Bank of England's benevolent attitude stimulated an initial market innovation in London where the Eurobond market was physically located. However, the existing literature on the development of the Eurodollar market does not pay sufficient attention to the constitutive role of the central bank. In particular, the crucial role of European central banks in placing US dollars directly or through their commercial banks should be recognised. Foreign central banks played an important role in the monetary development of the US dollar as the transferability of dynamic credit and debt relations was established. The process of creating new Eurodollars was intensified, as more foreign central banks accumulated dollars in their foreign reserves towards the end of the Bretton Woods era. Thus, the nature of the Eurodollar, sharing the fundamental US dollarness with the US ordinary dollar, indicates that the Eurodollar market, though outside any national banking jurisdiction, is not completely private monetary space. It drew central banks to settle debts denominated in national moneys of account in the mid-1970s (Chapter

5). Subsequently the dynamic process of Eurodollar production led the US central bank to intervene directly in the late 1970s (Chapter 6). The radical monetary policy of the US central bank was felt as much in the Eurodollar market as in the US domestic market, since they shared US money of account.

The truly international money market was formed when the Eurobond and London dollar CDs became fully integrated with the Eurodollar market, operating on the growing scope of US money of account. It was unlike other national money markets, which receive Eurodollars and need to convert them into their own currencies – a process that does not necessarily produce money supply (Machlup 1970). The US money market, however, which shares US money of account, is able to transfer Eurodollars directly into the US monetary space without the cost of conversion and risk involved. As Swoboda (1968) pointed out, dollar denomination rents were shared. This means that foreign banks joined the process of expanding the scope of US money of account by issuing debts in the dollar. As mentioned above, foreign central banks and their respective commercial banks participated in the hybridised process of creating US dollars on the Eurodollar market. US banks, operating in the international money market, were able to bring Eurodollars back to the US money market in the late 1960s when the supply of US ordinary dollars was restricted there. In this sense, the capacity of US dollar production through the international money market was significant, compared to other national money markets.

4.5 The Eurodollar and the US State

Meanwhile, as the rapid development of the Euromarkets was underpinned by a monetary transformation – the cross-border transferability of dollar-denominated debt – the foreign central banks and private international banks played a constitutive role in transferring dollar-denominated credit and debt relations across borders. In the 1960s, the Federal Reserve did not play a decisive part in establishing the international transferability of credit and debt relations, denominated in the US dollar; that is, it did not yet develop its monetary role outside the US monetary space. Rather, the US

central bank was concerned with the feedback impact of US capital outflows on the US market and preoccupied with the process of its institutional consolidation against Federal Reserve Banks.

The monetary development of the US dollar as having the capacity to transfer credit and debt relations did not come from the growing volume of US international trade or the advanced development of the US money market during the 1960s. The US money market did not have the capacity to promote capital inflows. Rather the US state was concerned with controlling capital outflows. The Federal Reserve was in the process of consolidating its institutional power against Federal Reserve Banks, and conferring it upon the Board of Governors and Chairman. The US monetary authority was making itself busy with managing capital outflows. Capital control programmes, such as the Interest Equalization Programme of 1963 and the Voluntary Credit Restraint Programme of 1965–74, encouraged US banks and corporations to operate in the Euromarkets (Hawley 1987; Schenk 2005). The US Treasury appeared complacent. New York was not promoted as an international money centre, and the US capital market was 'a very inefficient market for the raising of foreign bonds' (Burn 2006: 110). 'The activity of New York [in the 1960s] was never as prominent as the City of London was in the British economy' (Schenk 2005: 81). The US Treasury issued government bonds in order to finance growing public expenditures from the mid-1960s when the Johnson administration claimed to promote 'Great Society' and military expenditures in Vietnam, but the selling of US government debts was not internationally marketised until it established an auction system in the 1980s (Meltzer 2009).

In the early 1960s, the inflow of ordinary dollars from the US to the Eurodollar market was generally viewed as deteriorating the US balance of payments. For some, gold outflows were regarded as a crisis of confidence in the US dollar, termed 'the dollar crisis' of October 1960 (Triffin 1961; Hawley 1987: 8; Burn 2006). The Federal Reserve viewed the balance of payments problem as misleading because its trading account was sound, and the cause of the problem was short-term capital outflows responding

to interest rates differences outside the US – viewed as normal market processes (FOMC 1960: 13). According to Burn (2006) and Schenk (2005), the Federal Reserve did not recognise the development of the Eurodollar market until 1962. It seems probable, however, that it was at least aware of it before then since the 1961 annual report for the Bank for International Settlements discussed the Eurodollar market extensively, and US banks significantly marked their entry into the market (BIS 1961: 143).

The Federal Reserve viewed capital outflows differently. What concerned the Federal Reserve and the Kennedy administration was that capital outflow had a negative effect on money supply for US banks and businesses (a reduction on bank reserves) (Meltzer 2009: 308). In an attempt to ameliorate the threat of short-term capital movements, the Open Market Committee maintained 'the Treasury bill at a level that would be reasonably favourable relative to comparable interest rates abroad . . . It must be recognized, however, that policy action designed to meet the international situation by maintaining higher interest rates tended to reduce monetary base and the stimulus provided to the domestic economy. Thus, such action must either be defensible in terms of domestic needs or the effect on the domestic economy should be offset by other means' (FOMC 1962e: 30). Therefore, from September 1960, bank reserves were injected by *new money*, through the open market operation of the Federal Reserve. Long-term capital outflow, such as foreign direct investments and foreign bond issues in the US, was no longer ignored. From 18 July 1963, a tax was imposed on 'all new issues of foreign equities and on all foreign bonds sold in the US' (Hawley 1987: 45). The US balance of payments problem seems an exaggeration.

During the 1960s, the Federal Reserve in coordination with the Treasury increased monetary reserves through open market operations and formed foreign currency swaps with foreign central banks. In December 1960, the Federal Reserve ended the restrictive bills-only policy since the US, confronting short-term capital outflows, needed to encourage domestic investment. The Federal Reserve therefore

shifted from 'its preference for Treasury bill in its open market operations to the inclusion of long-term securities (BIS 1961: 12), as explored above. This experimental policy was called 'Operation Twist'. Long-term interest rates (such as long-term government prices) were kept low, while the federal funds rate between 1961–63 was set high: the mixture of fiscal expansion and tight monetary policy was 'outstandingly successful in providing a prolonged and stable expansion of the American economy during the 5 years prior to the end of 1966' (Mendelsohn 1980: 23). In the early 1960s, the Federal Reserve purchased nearly $4 billion of government securities, maturing from one to five years (Meltzer 2009: 319). The fiscal stimulus provided by the issuance of long-term government bonds was a crucial part of the production of credit money in the banking system. Money supply through the so-called high-powered money was continuing to grow (FOMC 1962d: 4).

According to Ingham, 'If a state is viable and can tax effectively, its promise to pay its debt (demand for money) will be the most sought-after, and consequently the basis of the creation of money in the banking system' (2004a: 141). The process of *new* government bond issuance and purchase between the central bank and the commercial banks leads to an increase in the latter's reserves so that the banking system as a whole obtains an increased capacity to issue *new* debts. Indeed, the increased monetary base was not the only factor affecting money supply in the US. As shown above, there were new monetary developments such as the innovation of certificates of deposit. Many US banks operating in the Eurodollar market brought US dollars back to the US market in the late 1960s (Machlup 1970). The production of US dollars within the US monetary space certainly increased significantly, and the government debt market was expanded accordingly.

The Federal Reserve also experimented with foreign currency operations. The initial scheme was to use Treasury's Stabilization Fund, totalling $300 million, in the forward markets; since 'such markets tend to be thin it was felt that a given amount of intervention might have a greater effect on confidence

and the general standing of the dollar than an equivalent amount of spot operations' (FOMC 1962a: 55). The New York Reserve Bank, authorised by the Federal Open Market Committee, undertook foreign exchange operations, acting like a fiscal agent of the Treasury. Charles Coombs, responsible for foreign exchange transactions at the New York Fed, commented that 'the whole point of these operations was to gain time until the basic situation changed' (ibid: 58). Later on, the operation of the New York Reserve Bank was taken over by the Federal Reserve System, involving a currency swap: 'a bilateral agreement whereby one central bank opened in its books an account in its own (or occasionally in a third) currency on behalf of the other central bank and vice versa' (Toniolo 2005: 386). The first currency swap agreement for $50 million was reached in 1962 between the New York Reserve Bank and the Bank of France (ibid: 387). That same year, the Federal Reserve established many swap lines with other foreign central banks (BIS 1962: 20). The swap arrangement was extended to the IMF and BIS; the Federal Reserve was able to draw foreign currencies from these international organizations and, at the same time, the central bank whose currency was withdrawn sent US dollars to the organisations. The availability of sources for currency swaps was enlarged, limited primarily to the US and Western European countries, but including Japan (BIS 1962, 1967). Indeed, the Federal Reserve's swap network excluded many developing countries such as those in South America. The currency arrangement between the Federal Reserve and European central banks was from then on an important feature of the international monetary system. The currency network grew from $2 billion in 1963 to $30 billion in 1978 (Toniolo 2005: 387). The Federal Reserve's engagement in foreign currency operations inevitably created an internal restructuring of the Federal Reserve System.

The process of foreign currency operations raised new questions as to who supervised the operations and who selected those who conducted currency transactions. The first question concerned where responsibility was located. In February 1962, Chairman Bill Martin raised 'the possibility of making System operations in foreign currencies subject to supervision by the Board of Governors rather than

the Open Market Committee' (FOMC 1962a: 63). William Treiber commented that 'the statute places in the Board the authority and responsibility for regulating the opening and maintenance of accounts with foreign central banks. On the other hand, it appears to be the intent of the statute that the Committee direct open market operations, and transactions in cable transfers, bankers' acceptances, and bills of exchange are open market operations' (ibid: 65–66). He went on to say that 'the reconciliation of the respective responsibilities of the Board and the Committee, as outlined in Mr. Hackley's memorandum of November 22, 1961, is appropriate' (ibid: 66). In other words, the international and domestic aspects of open market operations did not need to be separated. Some members of the Board, like Bopp and Balderston, favoured placing the responsibility in the hands of the Open Market Committee because 'problems arising out of such operations would have to be defended by the System as a whole' (ibid: 76). Their argument, however, was not convincing, especially regarding the practicality of the operation. Mr Robertson, a Board member, summarised that 'from a legal point of view, it did not make much difference whether Federal Reserve foreign currency operations were under the direction of the Open Market Committee or Board . . . However, the statute does specifically authorize the Board to exercise special supervision over foreign relations … From a practical point of view, the Board was in a position to act more promptly in this field because it could meet not only but hourly if necessary' (ibid: 72). A majority of the members at the meeting expressed agreement with Robertson and favoured the Board.

The next issue, raised by Bill Martin at the meeting on 6 March, concerned who selected the two required positions for conducting foreign currency operations: the Manager of the System Open Market Account, and the Special Manager for foreign currency operations for such Account. At the next meeting in April, Martin opened with the observation that 'the Committee's By-Law and Rules of Organization should be amended to provide for the Special Manager as well as the Manager' (FOMC 1962b: 2), meaning that the Committee would select them. Mr. Hayes, a board member, opposed this

proposal because it would 'obscure the institutional responsibility of the Federal Reserve Bank of New York . . . erode statutory authority of the Board of Directors of the Federal Reserve Bank of New York . . . create personnel problems for the Bank (ibid: 3). Martin noted that 'the Account Manager would not be an officer of any Federal Reserve Bank, but instead would be appointed by and solely responsible to the Committee' (ibid: 4). Martin asked Chairman Reed of the New York Reserve Bank about this matter. Reed argued that 'If anything should happen to weaken the status of the regional banks, that would be a step in the wrong direction. The Reserve Banks would begin to lose competent executives and be unable to attract community leaders to their boards of directors' (ibid: 6). He went on to say that the New York Reserve Bank, chosen to conduct transactions for the Open Market Account, must be satisfied with the candidates selected as Manager and Special Manager of the Account (ibid). Other attendees, such as Deming, a member of Federal Open Market Committee, preferred the option of the Committee and the New York Reserve Bank jointly appointing the positions (ibid: 15–17), but King, a member of the Board, felt that there was a clear need for authority (ibid: 23). Martin made it clear that his suggestion was about 'the future of the Federal Reserve System as a system and not about impairing the authority of any Reserve Bank … in the selection of the Manager and Special Manager authority was vested in the Open Market Committee' (ibid: 27). The proposal was put to a vote and approved by eleven to one (ibid: 28–29).

In addition, by 1967 the Board of Governors was dominated by Kennedy and Johnson appointees. More responsibilities, such as the 'modern budgeting process', were conferred upon it, and more employees were hired; between 1963 and 1968, the Board's staff increased from 608 to 790 (Meltzer 2009: 493). The Board of Governors also ended the New York Reserve Bank's major role in foreign currency operations during the 1960s. As Chairman Martin continued to centralise power in the Board of Governors, the position of Chairman became more influential in the decision-making process at the Federal Reserve.

In late 1961, there had been a debate on the issue of whether it would be desirable for the Federal Reserve to act like a fiscal agent of the Treasury (FOMC 1961). Some members of the Committee did not like the fact that they had to intervene in foreign exchange markets, but a majority of them, including Chairman Martin, seemed to accept the coordination with the Treasury. In the later half of the 1960s, the Johnson administration increased deficit financing and the Federal Reserve had to manage more government debts. Members of the Federal Reserve were divided on this coordination. When 'President Johnson ran large (budget) deficits in 1967 and 1968, the Federal Reserve would not raise interest rates enough to keep inflation low, so the larger deficit was financed by higher money growth' (Meltzer 2009: 512). Chairman Martin explained that 'Congress voted the budget and approved deficit finance. The Federal Reserve was not empowered to prevent the deficit or refuse to finance it' (Meltzer 2009: 475). Thus, it is clear that the Federal Reserve was ultimately dependent on Congress – something recognised by Ingham when he described the dynamic process of producing money as being based on the balance of power between the government (with Congress representing taxpayers) and bondholders (2004a).

The capacity of the US government to issue its debt depends on whether Congress views the issuance of the government debt as legitimate, since it is Congress that eventually approves the Federal Reserve to finance it. After the 2008 financial crisis, the US government and Congress struggled over deciding whether to produce new US dollars to have them ready to save troubled US banks. The power to produce US dollars, apart from the banking system producing endogenous money, eventually depends on how much deficit financing can be permitted and approved by Congress. (The management of the US's sound money of account will be dealt with in detail in Chapter 6.) As long as government budgetary plans are seen as legitimate to Congress, taxpayers and bondholders, the Federal Reserve is able to finance new government debts through open market operations in the banking system. The increased reserves in the US banking system as a whole are able to produce more money. More

government debts do not necessarily mean weakness of monetary power (Ferguson 2001; Ingham 2004a).

4.6 Conclusion

This chapter has attempted to reinterpret the rapid development of the Eurodollar market during the 1960s as the extensive monetary process of the dollar's development, following on from the first key development of the US dollar as international measure of value during the 1950s. The essential characteristic of the US dollar as an abstract measure of value was further practiced and expanded, as credits and debts were issued in the US 'dollarness' and transferred through the international money market. This chapter has argued that the second key development of the US dollar was its capacity to transfer dollar-denominated credits and debts via the offshore money market. In particular, European central banks played a key part in this monetary development of the US dollar since they provided US government debts which eventually created new US dollars, widely accepted to international banks. The transferability of the US dollar was facilitated by the practice of US money of account. The combined monetary developments of the US dollar were indeed a key underlying mechanism of the rapid development of the Eurodollar market in the 1960s. Thus, the inner process of dynamic Euromarkets was characterised by the transferability of credit and debt, denominated in the US dollarness.

The rapid development of the international money market during the 1960s was thus constitutive of developing the US dollar in terms of dynamic credit and debt relations. That is, the production of new US dollars involved a hybridised process in which US government debts, placed by foreign central banks, were transformed into private US dollars, and accepted and transferred to international banks active on the offshore money market. By way of swap operations between central banks and their respective commercial banks, a new source of US dollars flowed into the Euromarkets, which were lent to

international borrowers. Additionally, new monetary developments such as Eurobonds and London CDs contributed to the dynamic process of dollar production from the late 1960s in the Eurodollar market. In particular, whereas CDs were tightly regulated in the US domestic market and did not yet play a big role there, CDs denominated in the US dollarness – and thus possessing the innate transformability of financial assets – contributed to further forming the dynamic US dollar as credit and debt relations. The key development of the US dollar in the 1960s rested on the transformation of the dollar's capacity to transfer credit and debt relations through the international money market. The monetary process of dollar development was recognised not as exclusively involving US actors but as a hybridised process which involved foreign central banks with a dynamic source of US dollar reserves and foreign and US banks. Both US public and private debts were transferred between foreign central banks and private banks and between US banks and foreign banks, underpinned by the practice of the US dollar denomination which got underway in the 1950s. The transferability of credit and debt relations, denominated in the US dollarness, reinforced and expanded the scope of US money of account. As Swoboda (1968) noted, foreign banks joined the denomination rent by issuing debts in the US dollar.

Meanwhile, the Federal Reserve played no decisive role in the dynamic process of US dollar production outside the US monetary space. It appeared to be concerned with the domestic monetary conditions of US capital outflows, caused by US government regulation of the US market. The Federal Reserve was interested in consolidating its institutional power against Federal Reserve Banks. That is, as the demand for the US dollar increased, the US central bank was developing and centralising the power of the decision-making process. In particular, the Federal Reserve developed currency swaps with other monetary authorities, primarily Western European states rather than developing countries from South America and Asia. Nonetheless, neither it nor the US money market significantly influenced the monetary development of the US dollar as transferability of credit and debt relations across borders.

From the late 1960s, the Federal Reserve perceived the feedback effect of the Euromarkets on the US domestic market and began to distinguish the US domestic market from the offshore markets. Dealing with the complex linkage between the Euromarkets and the US domestic market eventually led to the establishment of the Federal Reserve as a global monetary authority in the context of the Volcker Shock during the early 1980s (Chapter 6).

Chapter 5 The US Dollar and the End of Bretton Woods

5.1 Introduction

The previous chapters have outlined the US dollar's two monetary developments: the establishment and acceptance of the US dollar as an international measure of value, and the dynamic transferability of credit and debt relations as denominated in the abstract dollar. In particular, the holding of US government debt by foreign central banks was crucial in securing the market practice of using US money of account in issuing debts in the first place, and in creating a cross-border transferability of dollar-denominated credit and debt relations in the Euromarkets. The transformation of foreign central bank practices created a historically unique process of new US dollar creation outside the US monetary space. The rapid development of the Eurodollar market during the 1960s was underpinned by the transferability of dollar-denominated debt across borders.

Considering insights of IPE achievements which regard the end of the Bretton Woods system as a key moment of the transformation of global finance, this chapter reinterprets it as a dynamic process of monetary transformation well underway in the 1950s and 1960s, as has been shown in the previous chapters. Building on the analysis therein of the two monetary developments of the US dollar, this chapter aims to untangle the next stage of the dollar's post-Bretton Woods monetary transformation. It thus places the analysis of the dollar at the centre of the end of the Bretton Woods system in order to reveal the changing characteristics of the dollar itself.

In the IPE literature, the end of the Bretton Woods system is generally interpreted in one of three ways: the renationalisation of exchange rates in the system of inter-states (Cohen 1977; Gowa 1983; Keohane 1984; Gilpin 1987); the transformation of global financial markets (Strange 1986; Walter 1991; Cerny

1993a; Helleiner 1994; Kirshner 1999; Germain 1997; Langley 2002) and the development of private institutions (Seabrooke 2001; Burn 2006; Konings 2008). These IPE literatures are discussed in more detail below. Each has contributed to understandings of the end of the Bretton Woods. Yet while these accounts regard the US dollar as a crucial component in the process of transformation, it is largely portrayed and accepted as the safe medium of exchange that underpinned financial transactions. Thus, the significance of this historical event has been understood as a financial process: analysis of the US dollar was put aside, and the characteristics of the US dollar were not specified. Consequently, these studies' explanations of the transformation of global finance remain limited. The *monetary* process of the end of the Bretton Woods system needs to be analysed.

The core assertion made in this chapter is that the end of the Bretton Woods system intensified the US dollar's two monetary transformations that were already taking place in the Euromarkets. The breaking of the link between gold and the US dollar transformed the latter into global money of account and the world's high-powered money. The breaking of the gold/dollar link led to the powerful consolidation of US money of account as an institutionally secured measure of value. Various debts, issued in US money of account were relatively secure, even though the external value of the US dollar was undervalued from the early 1970s. The international practice of US money of account further required decisive support from the Federal Reserve when a banking crisis disrupted the private practice of issuing dollar debts in the first place. The Federal Reserve offered US government debts to the foreign branch of a troubled American bank in London. The public character of the US dollar as the most transferable US debt was crucial to the continued practice of US money of account outside the US monetary space. The direct supply of US government debt by the Federal Reserve transformed the private practice of issuing dollar-based debts into an institutionally secured practice.

Furthermore, the end of the Bretton Woods system intensified the dynamic transferability of dollar

credit and debt relations in two ways. First, the end of the link between gold and the US dollar caused a number of foreign central banks (such as that of Japan) and oil-rich countries to accumulate US dollar reserves. In particular, surplus countries like Germany and Japan dramatically increased their official dollar holdings. Overall there was an exponential growth in world dollar reserves. Many foreign central banks followed the practice of their European counterparts by placing their dollar reserves in the Euromarkets and thus created a dynamic process of US dollar production outside the US. The US dollar was transformed into the world's cross-border high-powered money. The second post-Bretton Woods monetary development involved new hybrid money such as certificates of deposit (CDs) which, as discussed in Chapter 4, can perform as money and financial security. Monetary substitutability between money and financial security, though underway in the 1960s, contributed to the intensity of dollar debt transferability in both the US money and the Eurodollar market during the 1970s. The monetary transformation of bank credit-money played an important role in the further development of the US dollar.

While the end of the fixed relationship between gold and the dollar inaugurated the configurative transformation of the US dollar into world money, the Federal Reserve as an essential feature of the dollar was struggling to control the monetary dynamics of the US dollar's development. The demonetisation of gold freed the Federal Reserve from the obligation of holding gold reserves, and equipped it with an improved capacity to produce its own debt at will. It possessed an institutional capacity for becoming an international lender of last resort; indeed, it extended this role by providing dollars to Franklin National Bank in 1974. However, the Federal Reserve was not aware of the transformative process of the dollar's development, occurring in the US money market and the Eurodollar market. That is, it did not establish a common framework for estimating and interpreting monetary figures; for instance, the main policy opted for in the 1970s was the narrowly defined category of money, M1. A growing monetary disorder, caused by the dynamic processes of creating

dollar debts, complicated the monetary policy of the Federal Reserve. In this regard, the historical construction of the US dollar as world money was not completed yet.

Section 5.2 engages with the IPE literature for two main purposes: it explores how IPE achievements arising from the end of the Bretton Woods system have evolved with regards to the process of global financialisation; and it highlights what has remained under-theorised in the extant literature's accounts of Bretton Woods, showing how and why their accounts remain limited. The contention is that the end of the Bretton Woods era needs to be reinterpreted as the monetary process and, as in previous chapters, an analysis of the US dollar is central to that. Considering the impact of the collapse of the Bretton Woods system on the practice of US money of account outside the US, section 5.3 focuses on the relationship between the US's various debts and the dollar as international money of account. The significance of severing the link between gold and the US dollar is explained by way of the institutionalisation of US money of account when issuing debts in the first place. That is, the historical event was associated with the consolidated power of US money of account as an institutionally secured measure of value. Section 5.4 puts emphasis on the double monetary processes of US dollar development as the transferability of dollar-based credit and debt relations outside and within the US. The first monetary process of dollar debt transferability involves the practice of a number of foreign central banks, following European central practices by accumulating and placing US dollar reserves in the Eurodollar market. The other monetary process constitutes the dynamics of transformability between money and financial security in the US and the Eurodollar markets. The final section 5.5 addresses the Federal Reserve's growing influence outside the US alongside its struggles to control the monetary transformation of the US dollar.

5.2 Understandings of the End of Bretton Woods

The first wave of IPE literature understood the end of the Bretton Woods system as the breakdown of

formal institutions – the suspension of dollar convertibility to gold in 1971 (Cohen 1977; Gowa 1983) and floating exchange rates in 1973 and 1977 (Cohen 1977; Keohane 1984; Gilpin 1987). The suspension of dollar convertibility to gold, as Cohen and Gowa state, was seen as eliminating external constraints on US autonomous policies, thereby enabling the US state to 'shift the cost and responsibility of adjustment to others' (Cohen 1977: 142–143). On the other hand, Gilpin (1987: 141) primarily considered the collapse of the Bretton Woods monetary system to be the end of fixed exchange rates in 1973. He viewed the move to floating exchange rates as the elimination of external constraints not only on the US but other major states as well. Therefore, the end of the fixed exchange rates enabled states to move towards the 'renationalization of the world monetary system: individual nations were given greater responsibility for the determination of their own currency values' (ibid: 142). In general, the breakdown of the Bretton Woods monetary institutions led to the instability of the international money system, structured in the system of inter-states. While important in the domain of international monetary relations, the primary focus on the political characterisation of exchange rates does not explain why and how global financial markets were revolutionised. The second wave of IPE shifted from the politics of exchange rates to financial markets.

The second wave of IPE saw the end of the Bretton Woods system as a financial market transformation. Capital flows, which punctured the restrictive Bretton Woods system, were unleashed in full force once the system was disbanded (Strange 1986; Walter 1991; Cerny 1993a; Helleiner 1994; Kirshner 1999; Germain 1997; Langley 2002). More specifically, Walter (1991) saw the end of the Bretton Woods system as the crucial period of monetary changes setting the stage for global financial revolution. Such monetary changes include, in Walter's view, technological change, the shift to floating exchange rates, various sources of international liquidity and financial innovations (ibid: 201–208). His broad identification of monetary changes did not lead to the specification of how global financial revolution was related to the US state and the US dollar in a coherent way.

Unlike Walter, Strange (1986), Helleiner (1994) and Kirshner (1999) viewed the breakdown of the Bretton Woods system as unfettered short-term capital movements. The growing pressure of international capital flows or movements, originating from the Euromarkets, and enhanced by the political failures of cooperative capital controls and floating exchange rates in 1973, imposed a restricted arrangement of policy choices on major countries throughout the 1970s (Helleiner 1994). Capital movements released from the end of the Bretton Woods system prevented states from pursuing autonomous monetary policies. Major countries, under the enormous pressure of capital flows, were forced to accept conservative monetary policies and to abolish Keynesian expansionary fiscal policies subsequently.

In a similar way, Germain (1997) and Langley (2002), who focused on the US state's long-term capital arrangements during the Bretton Woods period, understood the turn to floating exchange rates as a key moment for the explosion of private global finance: the source of credit money was decentralised and privatised. The explosion of private liquidity in the post-Bretton Woods era was seen as 'the result of a combination of more efficient financial intermediation and the creation of new financial instruments' (Germain 1997: 105). The unbridled explosion of private capital movements was evidence not a political failure but rather of efficient or autonomous financial market processes. The exclusive focus on financial market processes of the second wave of IPE overlooked the process of constructing a new institutional framework through which the explosion of private global finance detonated in the first place.

The third wave of IPE paid great attention to the development of institutional configurations in the key financial markets of the UK (Burn 2006) or the US (Seabrooke 2001; Konings 2008, 2011). New institutional configurations were associated with the emergence of a new private monetary space, the City of London-based offshore Eurodollar market (Burn 2006); or new financial practices and relations

such as the direct involvement of US banks and their customers with financial markets (Seabrooke 2001); or the liability management of banks (Konings 2008, 2011). Endogenous institutional developments contained domestic financial dynamics, and the externalisation of the domestic frameworks was translated into the transformation of global financial markets. The end of the Bretton Woods era was, for these theorists, not directly linked to the collapse of Bretton Woods institutions but associated with the emergence of the Eurodollar market or the externalisation of institutional developments in the 1960s. Burn, for example, pointed out that the creation of the Eurodollar market enabled the freeing of the Bank of England and British banks from domestic responsibilities and such real economic concerns as production and employment. As the offshore money market attracted more international banks and customers from the rest of the world, it was transformed into a global financial market. Seabrooke viewed the rapid development of the Euromarkets as a consequence of the externalisation of US financial practices and relations and therefore understood the end of the Bretton Woods system as the international promotion of US financial practices and relations by the US state and financial community (2001: 73). Konings identified US banks' liability management skills such as CDs as a turning point for the US financial revolution. As US banks applied the new financial technologies to the Euromarkets, financial globalisation became Americanised.

In moving beyond financial market processes, the third wave of IPE enriched our understanding of the process of financial globalisation. Nonetheless, the focus on the process of developing institutional configurations overlooks the money side of financial globalisation. There has been no constructive engagement with the monetary process of the end of the Bretton Woods system: namely, the changing characteristics of the US dollar. While the end of the Bretton Woods system may have heralded a financial transformation, that was only because it furthered a monetary transformation that was already underway in the 1950s and 1960s, as previous chapters have shown. Thus, the termination of Bretton Woods institutions needs to be understood with a focus on the additional monetary

development of the US dollar. As has been emphasised throughout the thesis, even though most of the IPE literature recognises the role of the US dollar as a key component of financial globalisation, analysis of it is largely and passively confined to the sphere of market exchanges and thus considered an underpinning mechanism of facilitating financial transactions.

Seabrooke, for instance, recognised the important role of the US dollar as numeraire in selling US debts. The US dollar's numeraire status was granted at the establishment of Bretton Woods institutions in 1944 (Seabrooke 2001: 52), and since then has been primarily seen as a safe international medium of exchange in facilitating the sale of US debts. The concept of numeraire can be traced back to 'Walras' abstraction notion of the numeraire as a standard commodity' (Ingham 2004b: 174). Thus, the US dollar was narrowly understood as a convenient means of market exchange. Konings recognised the importance of financial innovations such as CDs for the distinctive rise of US finance. But the nature of CDs meant they could operate both as money of debt settlement *and* as financial assets. CDs were not regarded as an object of analysis in relation to the US dollar. More importantly, the dynamic character of the US private dollar required the public character of the US dollar and the constitutive role of monetary authority *to be* outside the US monetary space. That is, the process of financial globalisation cannot be explained only by the externalisation of endogenous institutional developments to the Euromarkets without conceptualising the changing characteristics of the US dollar.

Some theorists have attempted to place the role of the US dollar at the centre of financial globalisation and the US state. For example, Peter Gowan recognises the important role of private banks in creating new credit-money, although his understanding of money is premised on the social relation of production in the Marxist tradition (1999: 10–12). Gowan calls credit-money fictitious money created from future expectations rather than through past production processes; that is, *real* money comes only from production (ibid: 10). This is somewhat anachronistic monetary thought, and ignores the

process of endogenous money creation, not dependent on material expansion such as trade and production. Misunderstanding the core aspect of the Bretton Woods monetary system as being that gold was 'the numeraire of the system as a whole' (ibid: 16) leads Gowan to see the system's collapse as a shift from the gold standard to a dollar standard regime (ibid: 19). The price of an ounce of gold was fixed at $35. That is, rather, the US dollar as US money of account enabled gold to play the role of an international means of payments through official channels. In the post-Bretton Woods era, for Gowan, there was not much left for the US dollar to do in order to reinforce 'The Dollar–Wall Street Regime' (ibid: 24). More importantly, since Gowan views the dollar in terms of social relations of production, there was no room for conceptualising the inherently changing characteristics of the US dollar as the social relations of credit and debt, relatively independent of the processes of production and trade.

Others' perception of money and the US dollar has been fundamentally predicated on the commodity theory of money. For example, 'money has no inherent value of its own' (Kirshner 2003: 646), and 'nothing enhances a currency's acceptability more than the prospect of acceptability by others' (Cohen 1998: 97). As discussed in Chapter 1, the commodity theory of money faces a conceptual problem in explaining why worthless monetary forms have been dominant, given that the value of commodity money is derived from its medium of exchange or exchangeability. It is peculiar to consider that money is generally accepted as other people accept it. Previously discussed in Chapter 1, various theories of money – from orthodox and Marxist towards those of the sociological schools – do not consider the fundamental link between money (development) and the foundational and constitutive role of the state seriously. It is therefore problematic to place the value of money appropriately. The heterodox tradition of monetary thought does not deny the fact that the banknote is an important form of modern money, but it emphasises that the fundamental characteristic of money is not its forms but money of account which allows different forms of money to be transferred and generally accepted.

The *value* of money does not derive from what constitutes a particular form of money (coins, paper notes) in terms of its intrinsic value, but originates from organising state and society in the system of money relations – taxation – between the political authority and its members. What needs to emphasised is that the value of money originates from the state. Therefore, the analysis of money and the dollar cannot be separated from the role of the state, in particular the central bank.

At the end of the Bretton Woods system, the emergence of seemingly private global finance rather represented the strengthening of the US dollar, the infrastructural linkages of which enhanced the advantage of those international banks that joined the denomination rent of US money of account outside American monetary space. The strengthening of the US dollar also gradually increased the influence of the US central bank in the international money market. This chapter draws attention to the monetary process of the demise of the Bretton Woods system as related to the changing characteristics of the US dollar. What is emphasised is that the process of financial globalisation was not entirely private, but rather a hybridised process of the monetary transformation of the US dollar, involving the US central bank, foreign central banks, and US and foreign banks. The emergence of global finance was underpinned by the monetary transformation of the US dollar. In particular, the safe transferability of private dollar debts outside the US required the public character of the US dollar and a decisive support from the US central bank.

5.3 The US Dollar as US Money of Account

The importance of the severing of the link between gold and the US dollar (US money of account) does not simply lie in the fact that the dollar price of gold was no longer held, and the post-Bretton Woods system became the paper dollar-based system – which is commonly associated in the literature with the early 1970s' dollar crisis when emerging global financial markets lost confidence in the US paper dollar, regarding it as unstable, as it was no longer anchored in intrinsically valued gold, and leading to

its undervaluing compared to the external value of other currencies. This understanding not only misinterprets the nature of the US dollar but also, by focusing our attention on the politics of exchange rates, delimits the characteristics of the dollar and precludes an analysis of it outside of inter-state relationships (even though the politics of exchange rates is indeed an important aspect of international monetary relations between states). The relationship between the US dollar and the US state is too static. The many features of the US dollar are reduced to a view of it as a passive and ready tool for the state to manipulate its external value in relation to others. The general perception of the US dollar as either a pure paper form or a medium of exchange at the end of the Bretton Woods system cannot recognise it external to the inter-state system or the sphere of market exchanges and therefore may lead us to identify the fundamental force of global financial expansion as an aspect of international monetary relations between states. The relationship between money and state needs to be repositioned.

The significance of the gold/dollar break lays on that distinction between US money of account and US debts somewhat disappeared. That is, US government debts, in particular in the form of US Treasury securities and Federal Reserve notes, were seen as the same as US money of account. The demonetisation of gold led to the US government debts being regarded as institutionally secured debts, embedded in the practice of US money of account. Indeed, the blurring between US government debts and US money of account precisely contravened Keynes's attempt to draw a clear distinction between the essence of money as money of account and a particular form of money (the latter has been redefined in different historical circumstances – a distinction between the King of England and King George, in Keynes's phrase). The distinction between US money of account and the form of the US dollar collapsed. Many academics in various disciplines considered the banknote to constitute the essence and the entirety of money; the US dollar was regarded as a paper form of money like that being printed by the Federal Reserve.

The question, then, is why foreign holdings of the US paper dollar increased dramatically in the early 1970s when the external value of the US dollar was decreased in relation to other currencies during the so-called dollar crisis. 'The foreign exchange holdings of the central banks in the ten industrial countries of continental Europe increased from $8.1 billion at the end of March 1970 to $20 billion at the end of March 1971. The largest increase in official dollar reserves occurred in Germany where the central bank saw its holdings of dollar rise from $ 2.8 billion at the end of March 1970 to $10.4 billion at the end of March 1971' (Machlup 1971: 3). The reason for the dramatic increase of US dollar reserves held by foreign central banks has often been given as being because the US dollar was an international reserve currency established at the beginning of the Bretton Woods system. As discussed in the Chapter 4, however, the full establishment of US dollar as the international reserve currency is not entirely convincing given the slow growth of foreign central banks' dollar holdings during the 1950s and then its stagnation in the 1960s; in fact, it was the unwillingness of foreign central banks to accumulate US dollars that led to the rapid development of the Eurodollar market in the 1960s.

Rather, the US dollar was fully established as a key international reserve currency from the late 1960s to the mid-1970s when there was a dramatic increase in the purchase of US Treasury securities by Arab countries and major industrialised nations such as Germany and Japan. It was reflected in the revolutionary development of the Eurodollar market, as the international money market was the primary location for trading US treasury securities. The dynamic process of creating Eurodollars, as discussed in Chapter 4, was intensified during this period. The increase in credit and debt contracts denominated in the US dollar indicates the embedding of the US dollar as an international measure of value. According to Seabrooke, '[a] major attraction of US Treasury bills to Arab investors was that they could be *re-sold in the highly liquid Euromarkets*' (2001: 87, emphasis added). The attractiveness of transferable US government debts – that is, those that could be sold on down a chain of purchasers – was appealing to both European states and foreign investors. For US government debts to be fully

transferable required, at least, a means of debt measurement or denomination in the first place. As demonstrated in previous chapters, the US dollar as an international measure of value was in part practiced and reinforced by the transferability of US government debts and new hybrid monetary transformations in the international money market. Therefore, the establishment of the US dollar as an international reserve currency needs to be seen as a monetary process of dollar development, underway in the 1950s and 1960s. The reserve currency of the US dollar cannot be separated from the dynamic Eurodollar market in which private banks were able to resell and repurchase US Treasury debts. The reserve character of the US dollar as a dynamic source of money might begin with the conception of US sovereign money of account as something attractive to central and private banks in terms of transferring debts to third parties. Therefore, foreign banks joined the dollar denomination in issuing and transferring debts in the 1960s.

The crucial aspect of eliminating gold as the material basis of money lies in the way US money of account is understood as 'the *institutionally guaranteed* certainty that it will preserve its value in the terms of the unit of account' (Amato and Fantacci 2012: 39, emphasis original). Even though the external value of the US dollar was undervalued in comparison to other national currencies in the early 1970s, various US debts, public and private, were institutionally secured debts, embedded in the practice of US money of account in issuing and transferring debts. In particular, foreign holdings of US government debts increased dramatically, consolidating the institutional practice of US money of account and contributing to the actual process of creating and transferring US debts. Thus the extraordinary pace of Eurodollar market expansion during the 1970s; the Eurocurrency markets, comprising 80 percent of Eurodollars, experienced an explosive growth (Battilossi 2009). The intensification of creating and transferring dollar debts is dealt with in the section (5.4) below on the US dollar as transferable credit and debt relations.

In the Euromarkets, the delinking of US money of account and gold increased the concern of international banks with the risk of banking businesses, since movements on exchange rates and interest rates could affect the value of their liabilities and assets directly. As Konings pointed out, the liability management of US banks created rapid monetary expansion (though this was limited in the 1960s) brought about to the Eurodollar market and copied by other foreign banks. The increase in the liability aspect of banks, given the availability of the domestic money and international money markets, forced banks to worry about liquidity in the context of the gold/dollar break and floating exchange rates. Various debts, issued in the US dollar, seemed to represent cost-free transferability and 'the absolute form of every asset and instruments of credit. Store-of-value money is the ultimate *risk-free asset*' (Amato and Fantacci 2012: 39, emphasis original). Different dollar debts have wider transferability and therefore acceptability to private actors. Thus, US money of account and various dollar debts such as Eurodollar deposits, Eurodollar CDs and Eurobonds, were seen in the same context of wider transferability through the international money market. Eurodollar deposits, for example, had no exchange risk or cost involved for transfers between the Euromarkets and the US money market. US money of account not only provided the moneyness of the US dollar in terms of measuring debts within the US monetary space, and but also offered the internationally recognised institutional safety and cost-free contracts for issuing debts to foreign private and public actors. It was the end of the Bretton Woods system that contributed to the further development of US money of account into world money of account as an institutionally secured measure of debt. The continued practice of US money of account required direct support from the US state when a banking crisis disrupted the transferability of credit and debt relations, denominated in the US dollar.

Even though the US dollar as US money of account provided the institutional safety for debt contractors, the institutional safety of the US dollar was relative to other sovereign moneys of account. It was not entirely freed from the risk of a banking crisis that would disrupt transferability of dollar

debts. The exponential growth of the Eurodollar market during the 1970s was in part based on the reliability of US money of account. In comparison to US domestic deposits, Eurodollar deposits, however, were perceived as risky since 'they were insured, held by banks with no direct access to the Federal Reserve discount window, and located outside the legal jurisdiction of the USA' (Battilossi 2009: 18). The relevant question here is how Eurodollar deposits continued to expand in the context of turbulent international monetary conditions. In other words, the perceived risk of Eurodollars needed to be at least by the role of the Federal Reserve as a lender of last resort, and US money of account required a direct support from the Federal Reserve. In particular, what the central bank provided was crucial to the consistent practice of US money of account and the transferability of Eurodollars, when a banking crisis disrupted the transferability of dollar debts. US government debts, supplied immediately by the Federal Reserve, were crucial to the private practice of issuing debts in US money of accounts and the transferability of dollar debts.

The difference in handling the failure of two major international banks precisely demonstrated a decisive support for US money of account. In 1974, the German Bankhaus Herstatt and the American Franklin National Bank failed due to their excessive involvement in foreign exchange dealings in the offshore monetary space (Dale 1984: 156–161). The Bundesbank and the Federal Reserve took different approaches towards the foreign branches of these banks. German authorities closed Herstatt before reaching a settlement of debts (ibid: 74). After a long legal process, the creditors of its foreign branches were eventually paid about half the value of their assets (ibid: 156). Unlike the German authorities, the Federal Reserve took decisive action in providing Franklin National with $1.7 billion and taking over its foreign exchange operations, 'basically providing a guarantee that Franklin National would not, like Herstatt, leave its foreign creditors unpaid' (Kapstein 1994: 42). It also provided liquidity support to the London branch of the bank (Dale 1984: 160).

With regards to the failure of Franklin National, the core issue was whether the Federal Reserve would be able to provide the massive loan through its discount window on the condition that 'those loans are adequately secured by government obligations or by collateral deemed satisfactory by the Reserve Bank' (Spero 1980: 148). For the public funding to be available, the assets of the London branch had to be used as collateral; this required the support of the creditors of the London branch (Spero 1980: 151–152). They were presumed to be guaranteed by an implicit agreement of the Bank of England and the Federal Reserve to provide liquidity directly to the London branch (Dale 1984: 161). The London creditors were international depositors who placed Eurodollar deposits with the London branch. The implicit guarantee was to supply the US dollar probably as Federal Reserve notes. That is the public character of the US dollar as US government debts, the most transferable debt. The supply of the US dollar satisfied the claims of the creditors on the Euromarkets so that the idea of the decisive support from the US monetary authority was public knowledge and disseminated through the Euromarkets. The US dollars that were supplied started to transfer again from one hand to another. The practice of US money of account was reinforced as an institutionally guaranteed risk-free security. Consequently, the important role of the Federal Reserve as a supplier of dynamic US government debts cannot be separated from US money of account and the transferability of dollar debts outside the US monetary space.

5.4 The US Dollar as the Transferability of (US) Credit and Debt Relations

The breakdown of the Bretton Woods system intensified the monetary process of the Euromarkets in two ways: a number of foreign central banks dramatically increased US dollar reserves and thus transformed the capacity of the US dollar's credit and debt transferability into the world's high-powered money in the early 1970s. As discussed in the previous chapter, European central banks in particular began to place US dollar reserves in the Eurodollar market from the early 1960s. After the

gold/dollar severance, a number of central banks, in particular those of Japan and Arab countries, followed the practice of European central banks and embraced the dynamic transferability of US dollar debts in the offshore monetary space. Furthermore, new hybrid monetary transformations such as CDs contributed to the dynamic process of US dollar production both in the US money market and the Eurodollar market throughout the 1970s. CDs in particular increased the transferability of private debts to a new level of substitutability between money and financial asset. The doubled monetary processes of transferable public and private dollar debts transformed the US dollar into world money. Meanwhile, the Euromarkets continued to create new credit and debt relations in order to accommodate the supply of petrodollars.

The US interbank market was experiencing a new phase of monetary transformation from the changing nature of bank deposits. Traditionally, 'a bank deposit is a direct liability of the bank, as recipient of the funds, to the depositor. It entitles the latter to claim an equivalent sum of money, in a particular currency, plus interest, at a pre-agreed rate and over a pre-agreed period of time' (Versluysen 1981: 74). The bank deposit is illiquid until it reaches its maturity date. However, new hybrid money such as CDs changed the way money is produced. As Konings (2008, 2012) stressed, it boiled down to the capacity of private US banks that invented the monetary instruments. No longer passive deposit takers, private banks became active to make money markets for their own benefit. It played into Konings's insightful interpretation of the endogenous institutional development of the US financial markets. The core aspect of money instruments, particularly CDs, however, inherently transformed the nature of bank deposits. That is, CDs changed the fundamental feature of money: the transformability of money into securities being sold and bought in the secondary market. This means that the nature of money was performed as debt settlements or debt transferability *and* as financial assets. The idea of the bank deposit as money and financial asset is accepted in the endogenous money creation literature (Movoism and Pastrot 2003: 30). The dynamic nature of the bank deposit, as a hybridised form of

money for debt settlement and a financial asset, was still limited in the US money market until 1973 due to Regulation Q ceiling on deposit rates. Soon after lifting governmental regulations, CDs became 'the leading money market instrument' in the US market (Versluysen 1981: 74).

The transformability of CDs between money and securities revolutionised the US money market in the 1970s. The US Federal Fund market, the interbank market, fluctuated at around $1 billion during the 1960s along with the low volume of CDs issues in the same decade. However, the US interbank market experienced a dramatic growth from $7 billion in 1970 to $56.5 billion in 1975 (Kelly 1979: 129). The CDs market expanded rapidly in the decade since Regulation Q ceilings on CDs were partially suspended in 1970 and completely lifted in 1973 (Kane 1979: 164). Large CDs amounted to 'almost 30 percent of the time and savings deposits at large commercial banks in the United States' (Kelly 1977: 127). The close connection between the two markets represented an intimate substitutability of interbank deposits and CDs; the latter, as a hybridised form of deposit and security, contributed to the explosive growth of the US interbank market. Furthermore, unlike large US banks enjoying the issuing and trading of CDs for their own interests, small banks such as thrifts usually had fixed long-term assets and were not able to participate in lucrative CD business (Konings 2011: 127). Rather, they found themselves placing large amounts of deposits in the interbank market which provided high interest market rates in the context of high levels of inflation (Strange 1988: 38). The monetary transformation as a close substitutability between money and security could be processed into securities businesses in turn since the blurring between money and security would develop new forms of securities, very close to bank deposit. According to Silber (1983: 91–92), during the 1970s, six new monetary instruments such as mutual funds and Negotiable Order of Withdrawal (NOW) accounts came into being, primarily because of the high level of interest rates. High market interest rates, however, were derived from the process of money's transformability into securities through the interbank market. It was expected that transformability between money and securities would occur from the side of the

latter.

Indeed, the most outstanding monetary instruments during the 1970s were the Cash Management Account (CMA) and the Money Market Mutual Fund (MMF) (Enkyo 1989: 85). In 1977, Merrill Lynch established its CMA in towns in Colorado and Georgia (Clemos and Row 1988: 133). 'Linked with a Visa credit card issued by a bank, the CMA enabled customers to establish an investment account that would allow them to invest in stocks up to the credit allowed in law and to withdraw cash or borrow up to the same credit limit' (Enkyo 1989: 85). Remaining or idle cash in customers' accounts could be fully exploited to make a better return on securities such as stocks and bonds. So they were technically not regarded as a demand deposit account (Clemos and Row 1988). The customer's money was used to purchase and sell securities so that the final purchase determined the identity of the CMA as an asset account. However, the ambiguity of the CMA itself (rather than what it purchases) between business boundaries would not completely prevent moneybrokers using the CMA as a source of funding for investing in different markets such as the US federal fund market since the CMA constituted 'the liquidity of a demand deposit account' (ibid: 135). More significantly, MMF was 'a diversified portfolio investment instrument of short-term money market securities on which customers could write cheques receiving higher returns (market-related interest rate) than usual bank deposits' (Enkyo 1989: 85–86). MMFs, first introduced in 1972, provided a means of access to those individuals who were excluded from the money market securities (Treasury bills and CDs, for instance) due to minimum purchase requirements (Cook and Duffield 1979: 15–16). Both MMFs and CMAs were attractive to wealthy individuals who were concerned about high levels of inflation. Total assets in MMFs amounted to $185 billion and CMAs to $9 billion by the end of 1982 (Enkyo 1989: 86). The success of MMF and CMA attracted more nonbank financial institutions into such money markets-related businesses as Sears and American Express with a big capital base in the 1980s (ibid: 89).

The end of the Bretton Woods system catapulted the US dollar from the dynamic transferability of credit and debt relations into the world's high-powered money. Already well underway during the 1960s, the dynamic character of the US dollar was intensified as a number of central banks joined the practice of European central banks in terms of accumulating and placing US dollar reserves in the Eurodollar market. After the demise of the Bretton Woods system, the growth of international dollar reserves was truly exponential: up to 1969, the growth of US government debts at foreign central banks was 55 percent, since then increasingly dramatically by 1,900 percent (Duncan 2005: 521). The truly dramatic growth of the world's dollar reserves was symbolised by one surplus country, Japan, whose foreign exchange reserves (gold not included) increased by 1,146 percent between 1968 and 1978 (ibid: 27). Oil-rich countries also joined the accumulation of international dollar reserves during the 1970s (de Cecco 1987). The rapid increase of US dollar reserves held by foreign central banks was closely linked with the process of revolutionising the Eurodollar market. During the 1960s, European countries like Germany held the most US dollar reserves outside the US. In the post-Bretton Woods era, other surplus countries like Japan and oil-rich countries followed the European monetary practice. As more US government debts were placed in the Eurodollar market, further Eurodollars were created and revolutionised the international money market. The US dollar was established as the world's high-powered money, not the economic function of store of value but the dynamic character of transferring credit and debt relations, denominated in the US dollar, across borders. The dramatic accumulation of dollar reserves held by foreign central banks laid the foundation for today's global financial and trade imbalances (Duncan 2005; Schwartz 2014).

The monetary process of substitutability between Eurodollar deposits and Eurodollar CDs intensified the transferability of international dollar debts and this time attracted private small banks. The monetary substitutability contributed to the growth of the Eurodollar market as the international interbank market. The interbank market was central to the further development of Euromarkets since

it provided a mechanism of liquidity for various Eurodollar businesses – from speculation on foreign exchange dealings to Eurodollar loans to nonbanks. International banks, in particular big American banks, on the top tier of the interbank market, were able to exploit the flexible marketability of the Eurodollar CDs and engaged in 'self-reinforcing interrelationships between three international markets – Eurocurrency, Eurocredit and Eurobond' (Battillosi 2000: 160). Their various Eurodollar businesses since the early 1970s required the creation of 'inter-office' dealings – 'between branches of the same bank within the Eurocurrency inter-bank market', and the volume of internal dealings was rapidly growing (ibid: 167). The idea of inter-office dealings indicates that various Eurodollar businesses were internalised within the big banks' operations as a whole. Eurodollar CDs for liquidity purposes would be very attractive to them. Eurodollar CDs, constituting the commodity character of money, also attracted many international small private and corporate depositors. The issue of Eurodollar CDs enabled banks to attract Euromarkets' deposits from individuals and small corporations that 'had hitherto been prevented access to the international money market, where depositors of less than US $100,000 are a rare occurrence' (Versluysen 1981: 74). The volume of Eurodollar CDs grew rapidly, totalling $23 billion in 1978 (ibid). International banks, which had solid deposit bases but lacked the capacity to lend to nonbanks, were able to place deposits in the interbank market (Herring 1985: 112–113). Indeed, small banks seemed likely to have 'a greater involvement in the interbank market either as placers of funds than big banks' (Ellis 1981: 356).

The structural turn to floating exchange rates along with the enormous supply of petrodollars enhanced money's transformability into a financial asset. The move to floating exchange rates created room for financial innovations used to speculate on movements of exchange rates and interest rates. Betting on foreign exchange markets and interest arbitrage required safe but institutionally guaranteed risk-free money: that is to say, financial debts or deposits denominated in US money of account. Short-term Eurodollars, provided by the interbank market, were used to speculate on pure market price

changes so that they were transformed into liquid assets like commodities. Thus, the process of money's transformability into a commodity led to the explosive growth of the Eurodollar interbank market in which money did not seem to be *spent* but *transferred* from one hand to another. This monetary phenomenon may be termed the 'passive process of money creation', unlike the 'active process of money creation' which involves the bank lending to real economic expansion (Movoism and Pastrot 2003). The interbank market was closely associated with foreign exchange markets since the former was able to provide the ease of currency convertibility and offered 'a convenient mechanism for banks to manage their foreign currency and maturity positions' (Herring 1985: 115).

The monetary process of dynamic credit and debt relations, issued in the abstract US dollar, created international medium-term loans, called Eurocredits. Over 90 percent of them were denominated in US money of account (Battilossi 2000b: 109). The international group of banks provided international corporations and governmental agencies with medium-term loans at floating interest rates. During the years between 1973–77, ten countries were granted more than half of all Eurocredits: 'ranked in order, they were the United Kingdom, Brazil, Mexico, Italy and France, Spain, Iran Algeria, Venezuela, and Indonesia, and nearly all of their borrowing was official or officially guaranteed' (Mendelsohn 1980: 66). The distinctive feature of the international loan was the floating interest rate, which was adjusted at every six months to 'reflect changes in the underlying cost of funds to the banks' (Mendelsohn 1980: 71). The Euroloans were renewed every six months, when the lending bank tapped into the international money market to secure funding for the following six months (ibid). The international money market thus determined the base rate for the cost of the Eurocredits, representing a serious and unpredictable cost to borrowers. The 1970s was the heyday of international bank lending. After 1973, with the surplus of petrodollars deposited in the Eurodollar market, the volume of Eurocredits exploded, 'filling the gap between the short-term Eurodollar market and the long-term Eurobond market' (Battilossi 2000b: 108–109). The rapid growth of the Eurocredit, underpinned by the practice

of US money of account, showed a clear expansion of the US dollar as the dynamic transferability of credit and debt relations and thus reinforced the dominant position of the Eurodollar (the US dollar) in the international money market. The Eurodollar comprised 80 percent of the international currency markets throughout the 1970s (Mendelsohn 1980: 198; Battilossi 2009).

The monetary transformation of CDs as money and financial securities penetrated other national money markets, as CDs were issued in other sovereign moneys of account. The process of transformability between money and securities, occurring in the US money and the Eurodollar markets, was taking place in other national money markets through the form of CDs. In 1968, the Bank of England authorised a number of banks to issue sterling CDs by interpreting CDs as 'securities' in the Exchange Control Act (Bank of England 1972: 487). The official acceptance of CDs as 'securities' broadened the meaning of securities in the Exchange Control Act which had previously maintained a clear distinction between deposit and securities. British clearing banks, however, were not able to issue CDs in their own names due to 'the cartel in interest rates' (Kelly 1977: 127–128). After the new arrangement of the 1971 credit control, which broke the cartel, they were able to participate actively in sterling CD businesses (ibid).

During 1972, there was a rapid growth in the UK's money stock, reflecting the 'rapid rise in the amount of sterling certificates of deposit' (Bank of England 1973: 11). They consisted of 15 percent of the US total deposits in 1972 (ibid: 310). From that point on, the Bank of England included CDs in their estimations of money aggregates (ibid: 201). CDs contributed greatly to the development of the UK interbank market in the 1970s (Capie 2010: 481). Both clearing banks and discount houses as issuers made considerable use of CDs as a funding source and a financial investment so that CDs were 'a close substitute for interbank deposits' (Bank of England 1972: 492), and their markets were seen as an extension of the sterling interbank market. They became a permanent feature of the US banking

system. It was expected that other foreign banks, operating in the Euromarkets, were actively participating in issuing CDs in their national moneys of account. In particular, Japanese banks were second only to the US in the proportion (18 percent) of Eurocurrencies CDs they held in London during the 1970s (Versluysen 1981: 74). They were particularly interested in issuing long-term CDs up to five years. Dealing with long-term CDs led to the development of floating-rate CDs by Japanese banks (iibid: 77). The attractiveness of CDs subsequently made its way into Japanese yen markets. Thus, the transformability between money and securities was transplanting to other major money markets throughout the 1970s.

5.5 The US Dollar and the US State

The breakdown of the link between gold and the US dollar was meant to eliminate the obligatory operation of the Federal Reserve which had held 'gold reserves of a value corresponding to at least 25 percent of the banknotes issued' (Amato and Fantacci 2012: 90; Mayer 2001: 182). The Federal Reserve Act of 1913 required the Federal Reserve to hold only 'gold and negotiable bills of exchange against Federal Reserve notes and demand deposits' (Kindleberger 1978: 174). The official demonetisation of gold in 1971 reflected the dynamic process of national and international money creation in the form of hybridised money from state debts to private bank debts. In particular, US dollar debts were distinctively produced through the Eurodollar market during the 1960s, as discussed in Chapter 4. From the 1944 Bretton Woods Agreement, an ounce of gold was valued at $35. That is, the value of gold was expressed as US money of account. Indeed, gold was an international means of payment for dollar claims held by foreign countries. Gold was able to perform this monetary function because its fixed price was measured by US money of account. As the transferability of dollar-based credit and debt relations was dynamically produced, the practice of US money of account was consolidated *in relation to debts, not commodities like gold.* For the fundamental relationship between

money of account and debt, as discussed in Chapter 1, the severance of the link between gold and the US dollar could be regarded as a new beginning in the inherent connection of the US dollar and debts (debt production), reflective of the US dollar as world money of account and the world's high-powered money.

At the domestic level, the holding of gold reserves placed a certain limitation on the production of credit-money – Federal Reserve notes and demand deposits – within the US market. The capacity of the Federal Reserve to produce money was somewhat limited during the Bretton Woods era, while the Eurodollar market produced dynamic transferability of dollar credits and debts, and banks could tap into the Eurodollar market for the purpose of sourcing funding. According to Kindleberger (1981: 103), gold was 'en route to demonetization with copper, nickel, silver, not to mention wampum and clam shells'. The demonetisation of gold was an inevitable process of dollar development as part of the monetary transformation of the US dollar, relatively independent from the real economic processes in the second half of the twentieth century. The hybrid process of monetary transformation no longer held the monetary value of gold as a medium of exchange.

The Federal Reserve's obligation of gold reserves was initially broached in 1968 when major monetary authorities were allowed to adopt 'a separate, freely floating price for gold outside the central bank system, i.e., the two-tier system' (Kindleberger 1978: 205). However, it took nine years to lift the gold holding of the Federal Reserve completely (Munn et al 1991). With the elimination of its gold obligation, the Federal Reserve soon equipped itself with the capacity to produce money at will through the discount window or open market operation, as long as the rationale for creating money was seen as legitimate. In this way, the Federal Reserve could produce money, its own debt, directly through the discount window or could increase the monetary base through open market operations which in turn increased the capacity of the US banking system to create credit-money via the deposit-multiplying

process or the dynamic liability creation involved in the money markets. Of course, the Federal Reserve and the US Treasury were not immediately able to produce a vast amount of US dollars through open market operations or the discount window. The Federal Reserve had to stabilise prices, employment levels and the financial system. In practice, price stability was prioritised when there was a conflict between the price level and the employment level as demonstrated in the Volcker Shock between 1979 and 1982 (dealt with in detail in Chapter 6).

The demonetisation of gold thus provided the Federal Reserve with a ready tool or increased capacity to become a lender of last resort. The important feature for being a lender of last resort was to possess the capacity to create money since an adequate amount of money was immediately required to manage a crisis (Kindleberger 1978; Guttentag and Herring 1983). The classic concept of lender of last resort, developed by Bagehot, was to lend freely at a penalty rate only to solvent banks or companies with sound collateral (Kindleberger 1978: 174, 178). The Act of the Federal Reserve Bank required that banks in trouble should have sound collateral in order to receive loans from the Federal Reserve, and thus public loans could be secured in this way (Wallich 1977: 92). The status of solvency or the soundness of collateral, however, has depended on 'whether the panic is stopped or not' (Kindleberger 1978: 174). As will be discussed below, the Franklin National was initially thought of as solvent in May 1974, but with the persistent crisis, was declared insolvent in October (Spero 1980: 69). From a historical perspective, decisions regarding last-resort lending have not been rational but rather often political (Kindleberger 1978: 165–181).

The lender of last resort was originally understood within the national monetary space. The 1931 crisis modified this national conception into, at least, including international cooperation or the need for the international lender of last resort to prevent deflationary effects on the nation across borders (Kindleberger 1978: 194–201). However, there was no constructive attention to international lender

of last resort in the 1944 Bretton Woods agreement, and several attempted actions such as increasing IMF quotas, forward operations and swap lines, proved unsuccessful in the face of rapidly expanding Eurodollars (ibid: 201–205). The dynamic process of credit-money creation required the central bank to equip itself with the capacity to create money in order to respond to a banking crisis, as the nature of monetary transformation increased the transferability of credit and debt relations, denominated in the national moneys of account. For instance, the Federal Reserve did not consider the international dimension of US banks operating outside the US monetary space until the crisis of Franklin National Bank, the twelfth largest US bank with total assets of $5 billion in 1974 (Dale 1985: 159). Since the establishment of the Eurodollar market, it was the first time that a national bank crisis posed a threat not only to the US national money market but to the International money market as well (Spero 1980: 122).

The establishment of the US dollar as world money of account and the world's high-powered money did not translate to a correspondingly global monetary role for the Federal Reserve in the international financial markets. The active role of the Federal Reserve, involving the management of the Franklin National crisis, was seen as extending the traditional conception of lender of last resort to the Euromarkets (Spero 1980: 122; Helleiner 1994: 172) in the general interest of stabilising the domestic and international financial markets. The key aspect of the Federal Reserve as assumed international lender of last resort was to supply Federal Reserve loans to Franklin National's London branch, using which London creditors would be paid at the event of insolvency. Therefore, Eurodollar deposits in this sense would be treated like domestic dollar deposits (Spero 1980: 138). The dollar depositors at the bank were foreigners, and credits denominated in US money of account were international in nature, outside the US monetary space, but the institutional debtor to the Eurodollar deposits was the US Franklin National Bank. The bank used the Eurodollar debts for international lending and investment purposes. The ambiguous status of the Eurodollar was clarified by the Franklin National crisis: not all

Eurodollars, but those deposited at US banks, were likely to be treated like US domestic deposits, whereas other authorities such as Germany, Italy and Israel, in the case of foreign subsidiaries, did not seem as much determined toward Euro-deposits, denominated in their moneys of account as the US monetary authority (Dale 1985: 156–164). After the 1974 international banking crises, 'there was a tendency for depositors to shift their money out of the Eurodollar market into US-based banks' (ibid: 161). The decisive role of the Federal Reserve in securing the London foreign creditors seemed to be as American rather than international lender of last resort.

The further aspect of the Federal Reserve's handling of the troubled bank was related to the US domestic money market. The Federal Reserve's decision to provide substantial liquidity assistance was to 'prevent the severe deterioration of confidence at home' and to buy time to resolve the banking crisis (Federal Reserve of New York 1974: 23). In the summer of 1974, the Federal Reserve was deeply concerned with the emerging liquidity difficulties in the US money market and with possible international repercussions (ibid: 10). The primary reason for Franklin National Bank's troubles was linked to funding practices: the bank pursued aggressive lending and investment strategies by being heavily dependent on the funding sources of the Federal Fund market (through the issue of CDs) and the Eurodollar market as well (ibid: 25). This reflected how vulnerable US banks could be regarding their funding sources and the way money was created in the US banking system. In other words, US banks were more likely to depend on the Federal Reserve as lender of last resort when the market was not in their favour, leading to the reinforcement of the hierarchical money structure in the process of money creation. Furthermore, the monetary process of the dollar's development, such as the transformability of the US dollar into financial assets, indicated that the Federal Reserve would be exposed to any potential crisis's broader effects and therefore would need to provide a growing volume of money to the US banking system. 'Banks did not come to the discount window for funds until they had entirely lost their access to funds from the private markets' (Mayer 2001: 132). Despite

the fact that there was the Federal Deposit Insurance Corporation (FDIC) as an insurance agency, the insurer did not have the capacity to create money – hence the Federal Reserve 'must stand behind the deposit insurer' (ibid) as the source of money, as demonstrated in the 1983 Continental crisis (Dale 1984: 164–167). It was more likely that the process of monetary transformation would extend the monetary role of the Federal Reserve as money creator, and would draw it to intervene directly in financial markets in times of crisis.

The Federal Reserve was the most worried about the demise of the Bretton Woods system (Gowa 1983; Helleiner 1994). In particular, the Federal Reserve was concerned that capital flows would disrupt 'its autonomy in formulating and implementing monetary policy' (Helleiner 1994: 118; Meltzer 2009: 760). The Federal Reserve's control over rising inflation was frustrated by capital inflows from the Eurodollar markets during the late 1960s, so it imposed 'a 10 percent special reserve requirements on increases in Eurodollar borrowings above a base level by American banks' (Kelly 1977: 100); Eurodollar *borrowings* were treated like domestic deposits. This new reserve requirement enabled 'the Board to get control over the dollar inflows without altering the whole range of domestic policy' (ibid: 101). 'By the end of 1972, the foreign branches in London used only 2.7 percent of their resources for supplying their parents with funds compared to a level of 30 percent in 1969' (ibid). Perhaps, responding to charges of discrimination, 'the Fed eventually removed the relatively heavy requirements on Eurodollar borrowing by American banks, bringing the level more in line with the reserves required on comparable domestically acquired funds' (ibid). Treating funds borrowed from foreign branches like domestic deposits temporarily enhanced the capacity of the Federal Reserve to implement monetary policies. But soon, it faced a more daunting test.

The real challenge to the US dollar and the Federal Reserve was growing and persistent inflation and inflationary expectations in the 1970s; inflation rose rapidly from 1973, reaching 12.2 percent in 1974,

decreasing over the next two years but then increasing quickly again to 6.8 percent in 1977 and 13.3 percent in 1979. The Federal Reserve in this decade was 'very hard pressed to devise policies that would both reduce persistent upward price pressures and keep employment and economic growth on a socially and politically acceptable path' (Axilrod 2011: 56). The Federal Reserve under Arthur Burns started to make an effort to control inflation. 'The Federal Open Market Committee took a significant step in January 1970 by adopting a directive emphasizing the monetary aggregates (Degen 1987: 156). 'Monetary policy would now be measured by money and bank credit, not primarily by money market conditions as had been the case since the time of the accord' (Degen 1987: 156). However, the majority of the FOMC members were unconvinced by monetarism (ibid), and Arthur Burns himself doubted the mechanistic relationship between money supply and economy; rather, he believed that 'there was a powerful inner dynamic within the US economy that was independent of monetary policy and the level of the money supply within a fairly wide range' (Axilrod 2011: 58). 'Money-market and bank liquidity conditions, characterized in particular by the federal funds rate, remained the day-to-day operating targets for the Fed' (ibid: 72).

As discussed above, the dynamic process of monetary transformation through the link between the US money and the Eurodollar market disrupted the Federal Reserve's control over persistently rising inflation during the 1970s. Not only did the monetary dynamics of the Euromarkets have an impact on the US market, but also the new hybrid monetary transformability between money and security (such as CDs) complicated the monetary policy of the Federal Reserve. Even though the Federal Reserve developed various definitions of money from narrow to broad – from M1 (currency plus demand deposits) to M2 (M1 plus time and saving deposits) to M3 (M2 plus certificates of deposits) and so on – it seemed to be unaware of the endogenous monetary revolution: for example, M1 was counted as a policy option (Axilrod 2011: 74). During the 1970s, 'the relations between narrowly defined money (M1) and reserves (spending) broke down' (Wray 1992: 300). Monetary innovations 'continually

expanded those types of assets that function[ed] as money' (ibid) and remained outside the Federal Reserve's control. The process of monetary development posed 'a problem of interpretation of money-supply figures' (Axilrod 2011: 74). The monetary policy of the US central bank was much more expansive than was thought in the 1970s (ibid: 75). 'The problem of inflation and control of money supply were not solved but became more severe as reaching October 1979 when a reserve operating target was adopted without regard to interest rates' (Degen 1987: 157).

5.6 Conclusion

This chapter has reinterpreted the end of the Bretton Woods system in order to disentangle the monetary process of the US dollar's development which had been built up during the previous decades. The monetary process of the end of the Bretton Woods system has been disaggregated as encapsulated in three dimensions of moneyness. The opening section of this chapter highlighted the fact that the existing IPE literature has not theorised the monetary side of the rise of global finance as being closely linked with the end of the Bretton Woods system. This chapter has therefore emphasised this aspect to draw attention to the monetary mechanism of financial globalisation, with the analysis of the US dollar at its centre. As argued in Chapters 3 and 4, the US dollar was developed within the practice of US money of account and the transferability of credit and debt relations, denominated in the US dollar, outside the US monetary space, while the capacity of the Federal Reserve was underdeveloped during the 1950 and 1960s. The key argument of this chapter has been that the end of the Bretton Wood system transformed the two essential characteristics of the US dollar to be the international money of account and the world's high-powered money. Simply put, the US dollar became fully established as a dominant and dynamic reserve currency.

Admittedly, to a certain extent, the power of the US state gave rise to the US dollar reserves held by foreign monetary authorities. The power of the US state might have contributed to the reserve status

of the dollar by providing economic carrots to other states or by forcing them to hold dollars at the context of Cold War. The reserve status of the dollar, arising from an imbalance in global power relations, can be regarded as 'master currency' in Susan Strange's term. The simple relationship between reserve status of money and state power leads to the characterisation of the former as a *static* reserve currency since the conceptual tool for characterising the reserve currency rests on either medium of exchange or store of value. Neither can grapple with the dynamic character of transferable credit and debt relations, denominated in a state's money of account, outside the sovereign monetary space. As has been emphasised in this chapter, the real character of the US dollar as world money or a key international reserve currency is not the economic functionality of store of value but essentially the two interacting monetary features of denominating new debts in the US dollar and transferring them through the offshore money market. In particular, the practices of foreign central banks played a decisive role in configuring cross-border transferability of credit and debt relations, as they placed US government debts in the Euromarkets. Foreign central banks and their interactions with commercial banks created a historically unique process of new US dollar creation outside the US. US government debt was the foundational debt for the international rise of the US dollar. Not only did these debts create a dynamic process of new US dollars but also the supply of government debts as the most transferable debt was essential to securing the practice of US money of account and dynamic transferability of credit and debt relations outside the US monetary space when a banking crisis disrupted the transferability of credit and debt, issued in the US dollar.

The significance of the end of the Bretton Woods system was the intensification of the monetary transformation of the US dollar. The gold/dollar severance led to the market perception that the distinction between US money of account and various US dollar debts had become somewhat blurred. The latter were regarded as secured debts, underpinned by the international practice of the former when issuing debts. Even though the external value of the US dollar was undervalued from the early

1970s, foreign holdings of public and private debts, issued in the US dollar, increased dramatically. In this regard, the US dollar was transformed into world money of account for measuring debts. The consistent practice of the US dollar denomination required the decisive support of the Federal Reserve when a banking crisis disrupted the monetary practice in 1974. The central bank provided US government debts to the foreign branch of the troubled Franklin National Bank. The supply of the US dollar as the most transferable US debt was crucial to the continued practice of issuing dollar-based debts and the international transferability of dollar debts as well. The essential characteristic of US money of account was an institutionally secured measure of value.

The end of the Bretton Woods system, furthermore, transformed the transferability of dollar-based credit and debt relations to the world's high-powered money. The intensification of dollar debt transferability across borders was understood in two main ways. First and foremost, the demonetisation of gold caused a number of foreign central banks, such as those of Japan and oil-rich countries, to dramatically accumulate US dollar reserves. The growth of the world's dollar reserves was truly exponential. Following the practice of European central banks, they placed their dollar reserves in the Eurodollar market and created dynamic US dollar debts, transferable and readily acceptable to international banks. Moreover, new hybrid money such as CDs possessed an inner monetary transformability to perform as debt settlements and to become financial security itself. The monetary transformability between money and financial security, though underway during the 1960s, really took off and intensified the process of new private dollar debts in the US money and Eurodollar markets during the 1970s. Therefore, the monetary transformation of bank credit money played an important role in the transferability of dollar debt. The doubled monetary processes of dollar debt transferability transformed the US dollar into a dynamic reserve currency. To be more precise, the transferability of private dollar debt contracts was dependent on US government debts. The supply of US government debts was crucial to the continuous process of dollar debt contracts outside the US.

The end of the link between gold and the US dollar gave rise to the equipping of the Federal Reserve with an improved monetary capacity to produce money at will. The Federal Reserve was no longer required to hold a certain level of gold reserves to issue its own debt. It was thus better able to serve as international lender of last resort. But the institutional capacity of the Federal Reserve did not spontaneously lead to the establishment of the US central bank as a global monetary authority over the transformative processes of the US dollar. Even though the central bank attempted to distinguish the governance of the US money market from the Eurodollar market, it was not successful in controlling persistent inflationary pressures because the linkage between the Eurodollar market and the US money market complicated its monetary policy. Furthermore, the inner process of monetary transformability between money and financial security created a problem for estimating money supply as a whole since M1 was counted as a policy option during the 1970s. The Federal Reserve was struggling to control a growing monetary disorder, caused by the dynamic process of dollar debt contracts in the US money and the Eurodollar markets.

This chapter's analysis of the end of the Bretton Woods system focused on the monetary process of the US dollar's development. It has attempted to invert the widely accepted interpretation of this event as a financial transformation by foregrounding it in the dynamic monetary transformation of the US dollar, already underway in the Eurodollar market. The shifting characteristics of the US dollar were inherently constitutive of the process of financial globalisation. The transformation of the US dollar as world money was the key underlying mechanism of the rise of financial globalisation. In particular, as emphasised above, US government debts (as the most transferable US debt) were the foundational buttress for the transferability of private debt contracts and as well as the private practice of US money of account outside the US monetary space. From the 1944 Bretton Woods Agreement towards the 1970s, the two essential features of the US dollar became the world's dominant money of account and the world's high-powered money, while the Federal Reserve did not develop the capacity to control

the dynamic monetary process of dollar development. The historical construction of the US dollar as world money was not completed quite yet.

Before moving on to Chapter 6, however, the relationship between the argument of this thesis and the literature on seigniorage requires some brief clarification. In economics, the concept of seigniorage has been associated with the *fiscal* benefit that the state would receive from the actual production of different forms of money in history: coins, paper moneys backed by reserves of precious metals and 'fiat' moneys without their convertibility to precious metals. It is often claimed, for example, that the production of paper money instead of fully bodied coins generates seigniorage revenue to the state (e.g. Black 1989). The economic interpretation of the concept of seigniorage suffers from several problems. First, the primary definition of money as an exchangeable commodity faces a fundamental problem to explain why fiat money without its convertibility to previous metals is generally acceptable within to society. Second, the economic treatment of the state as an economic agent like a giant firm does not lead to understanding the very nature of sovereign power of the state in relation to other economic agents in the sovereign monetary space. Thus, the characteristic of state liability cannot be understood as the same feature of private liability. That is, economists do not sufficiently recognise the hierarchical structure of modern monetary system in which state money is to found at the top. Lastly the production of modern credit money is *shared* between the state and the banking system in the sovereign monetary space. The economic conceptualisation of seigniorage is effectively challenged by the emphasis on monetary and fiscal sovereignty that is elaborated by the heterodox approach to money (see Wray 2004).

The economic definition of domestic seigniorage is typically extended to the international sphere. It is widely argued, then, that the US (the government and the non-state sector) gains significant seigniorage because the US dollar operates as the world's leading international currency. According,

for example, to Barry Eichengreen (2011: 4), 'About $500 billion of US currency circulates outside the United States, for which foreigners have had to provide the United States with $500 billion of actual goods and services . . . Foreign central banks hold close to $5 trillion of the bonds of the US treasury and quasi-governmental agencies' (Eichengreen 2011: 4). As foreign states accumulate US dollar reserves, they are obliged to provide cheap finance for the US external deficit in international balance. In Eichengreen's understanding, foreign holdings of the US dollar should require the US current account to be deficit in terms of international balance of account. He assumes that foreign holdings of the US dollar represents the foreign purchase of real US goods and services, but this orthodox economic idea is based on an understanding of the essence of money as medium of exchange. It is fundamentally mistaken because, as this thesis argues and as this chapter has underscored in relation the rise the US dollar as world money in the early 1970s, the process of modern monetary creation is relatively independent from real economic processes. More precisely, the US economy began to experience its current account deficit only *after* the 1974 oil crisis (Cohen 2013), when US dollar reserves were already accumulated in the holdings of foreign central banks. Foreign banks, in effect, joined in processes of 'dollar denomination rent' from the late 1950s outside of the US national monetary space. Eichengreen's interpretation of the US dollar's international seigniorage completely ignores the dynamic process of the Eurodollar market in which dollar creation does not involve direct exchanges for US goods and services. The economic idea that the international use of the US dollar outside the US simply provides a subsidised or interest-free loan to the US is misleading. In this sense, the international use of the US dollar cannot be simply interpreted as the imposition and extension of international seigniorage.

Apart from the international use of the US dollar, understanding of foreign dollar reserves held by foreign central banks is contested between economists. As mentioned above, Eichengreen points out that foreign accumulation of official dollar reserves such as US Treasury debts provides cheap finance

for the US external deficit. In contrast, Cooper (1987) holds that official dollar holdings do not provide any specific fiscal gain to the US government, since competitive financial markets for government debt would oblige the US government to offer high interest rates that would in return eliminate any gains accruing to the US. However, the cost/benefit analysis of US dollar reserves does not provide room to understand a distinctive character of US government debt in global finance. The international competitive market for government debt does not necessarily increase alternative choices for other governments' debt. Rather, and as Cohen (2013) begins to suggest, it is the centrality of US government debt to global finance (not the US trade deficit) that creates the situation in which the US is able to finance such huge and persistent fiscal deficits. More specifically, as foreign banks issue debt, and foreign central banks accumulate US government debt, the abstract quality of the US dollar as US money of account is globally practiced in the process of transferring credit and debt relations across borders. In particular, US government debts play a key part in the reinforcement of the abstract dollar practice through the international money market. In contrast to the economic convention, US current account deficits can be seen as a sign of the global role of the Federal Reserve, as reflected in the recent financial crisis. The financial capacity of the US state to finance its deficit lies in its monetary power to *issue its own debt*, globally acceptable and transferable among foreign private and public actors. The nature of 'exorbitant privilege' of the US dollar will be further detailed in engagement with the contemporary dollar debate in conclusion (see 244-250).

Chapter 6 The Volcker Shock: the US Dollar and the US Monetary Authority

6.1 Introduction

The previous chapter paid close attention to the end of the Bretton Woods system in relation to the monetary processes of the US dollar's development which had been well underway in the 1950s and 1960s. The severance of the link between gold and the dollar transformed the offshore market practice of US money of account and cross-border transferability of dollar-denominated debt, as recognised in the 1960s, to the world institutionalisation of US money of account and the world's high-powered money. That is, US money of account was firmly established as an institutionally secured measure of value when debts were first issued outside the US because the distinction between US money of account and US various debts had evaporated somewhat, and more importantly, US government debt, provided by the Federal Reserve, secured the institutional practice of debt issuance.

Furthermore, the end of the Bretton Woods system led to the exponential growth of world dollar reserves and thus the further development of transferable dollar-denominated debt across borders. The end of the fixed relationship between gold and the dollar caused a number of non-European central banks to dramatically accumulate dollar reserves and to place a significant amount of them in the Euromarkets. This practice created a dynamic process of new dollar creation – thus confirming the dollar's status as the world's high-powered money. At the same time, the transformability between money and financial security contributed to the process of dollar creation in the US and offshore money markets. On the other hand, the Federal Reserve was not aware of the monetary transformations of the dollar so that the monetary policy of the Federal Reserve was not having any real effect on the revolutionary force of the money markets.

Unlike the previous chapters, which have attempted to reinterpret key historical cases through the lens of three essential features of moneyness and therefore to conceptualise the changing characteristics of the US dollar, this chapter takes the Volcker Shock between 1979 and 1982 as a significant moment to explore the linkage between the US dollar and the US central bank – since the remaining essential feature of the US dollar as world money rests on that monetary relationship. Here, the ways in which the Federal Reserve dealt with the forces of the money markets and inflationary pressures are the focus.

In the extant IPE literature, the Volcker Shock has been interpreted in three main ways. The first wave of IPE understands it as the submission of the US state's autonomous economic policy to the direct pressures of foreign states in the system of inter-states. While not rejecting this, the second wave of IPE considers the Volcker Shock's monetary shift to represent the submission of the US state to the forces of global financial markets in such a way as to obtain market confidence in the US dollar. The third wave of IPE understands the monetary turn as the direct revenge of 'financial capital' over labour, or institutional reforms suitable for American financial power.

In this way, the IPE literature views the Volcker Shock as either a subjugation of the US state to the pressure of other states or the force of international financial markets, or as initiating institutional reconfigurations more functional for US financial power. Clearly, in retrospect, the latter interpretation is the more convincing, since the Volcker Shock did not lead to the decline of the US state, for example. As this chapter discusses, however, what is not considered is the place and role of the Federal Reserve as a monetary authority, nor the specific market it targeted, nor the specific goal it attempted to achieve. That is, the fundamental problem of the US dollar went deeper than the undervalued, external value of the US dollar or the inflated US dollar. The traditional monetary policy of the Federal Reserve could not solve the problem of the US dollar, and this posed a direct challenge to the US

central bank as a monetary authority. So, with regard to the Volcker Shock, a key question not hitherto raised is how the Federal Reserve dealt with the monetary linkage between the dynamic process of US dollar creation and inflationary pressures.

The central argument of this chapter is that the Volcker Shock was a reassertion of the Federal Reserve's monetary authority over the US money market and the Eurodollar market, greatly contributing to inflationary pressures. The Federal Reserve established itself as a global monetary authority by obtaining control over the dynamics of the international money market, in particular, at the same time opening its discount window and privileged dollar borrowing to any depository institutions, regardless of who owned them, as long as they were based in the US. The US central bank thus extended the role of last resort beyond US banks. More specifically, the problem of the US dollar derived from the dynamics of the US money market and Eurodollar market as an excessive creation of US dollars, in part intertwined with the undervaluing of the US dollar and the second oil crisis. The Federal Reserve's traditional monetary policy – interest-rate targeting – was not having any real effect on the complex linkage between the money markets and inflationary pressures. The process of monetary transformability between money and credit was occurring outside the control of the Federal Reserve. The challenge faced by the US central bank was how to break the complex linkage between the dynamic of the money markets and inflationary pressures.

The operational shift to monetary targeting of October 1979 was a direct intervention by the Federal Reserve into the interbank markets as a key source of funding various investments, in order to re-establish the monetary relationship between the Federal Reserve as a monetary authority and private banks. The Federal Reserve aimed to create highly unstable short-term interest rates, because of which banks could no longer be sure about the valuation of their assets and liabilities. Private banks in the money markets were forced to pay careful attention to what was decided at each FOMC meeting. The

internal workings of Federal Reserve monetary policy-making became a new means of monetary governance over the dynamics of financial expansion. While the Volcker Shock brought about the recession of the US economy and the world economy, bringing double-digit inflation under control, the Federal Reserve obviously failed to control total banking reserves, eventually abandoned monetarism and returned to interest-rate targeting. Furthermore, during the Volcker Shock, financial deregulations, such as the removal of interest-rate ceilings on various bank deposits, improved the effectiveness of the Federal Reserve's monetary policy as deregulations increased the pace of transformability between money and credit – that is, between the money market and financial markets.

Section 6.2 begins to engage critically with the IPE literature on the Volcker Shock. It shows how theorists have evolved to make sense of the historical event, and then aims to highlight why their accounts of the Volcker Shock are incomplete. Section 6.3 reinterprets the Volcker Shock with an emphasis on the monetary relationship between the dynamic process of US dollar production and the Federal Reserve. In particular, it attempts to demonstrate what the October operational shift to monetary targeting meant to the US dollar and the Federal Reserve as a monetary authority. Thus, the Volcker Shock is analysed from the perspective of the Federal Reserve in relation to the dynamic of financial expansion, underpinned by the practice of US money of account and the transferability of dollar-based credit and debt relations. Section 6.4 moves on to explain the extended role of the Federal Reserve as lender of last resort, deriving not simply from universal reserve requirements but from what the universal reserve measure meant to any US-based banks during the Volcker Shock. The final section 6.5 elucidates three main reasons why the Federal Reserve returned to the traditional monetary policy of interest-rate management.

6.2 Understandings of Volcker Shock

The significance of the monetary shock was not seriously considered in the first wave of IPE except by

a few. Robert Keohane (1982) did not discuss it directly but attempted to show why the industrialised world experienced high levels of inflation during the 1970s. He made the strange argument that world inflation in the 1970s was simply caused by the decline of US hegemonic power (to influence others), based on his perception of power as 'tangible sources'. Robert Gilpin did recognise the historical importance of the Volcker Shock. He considered the October 1979 policy shift to pragmatic monetarism as the reaction of the US state to the unwillingness of Germany to support the US dollar and to import American inflation: 'This was the first time in the postwar era that the US made a major change in its domestic economic policy in response to foreign pressures' (1987: 331–332). To Gilpin, the foreign pressure meant Germany's changed attitude, and the policy shift of the US state revealed 'the end of American hegemony' (ibid: 332). In the context of broad discussions about the decline of US power, world inflation was closely associated with the instability of the post-Bretton Woods monetary system, caused by the declining power of the US state (Krasner 1978: 82). Regarding the US dollar as a key mechanism of the stable Bretton Woods system (a safe international medium of exchange), the unstable post-Bretton monetary system led to the conclusion that the US dollar as international money had come to an end (Kindleberger 1976: 35). The static relationship between money and state misled these theorists to identify the driving force of the international monetary system as the declining power of the US state. Consequently, the 1979 monetary shock was primarily understood in an inter-state term.

Without denying the pressures of foreign countries, the second wave of IPE regarded the monetary shock as a turning point in the relationship between the US state and international financial markets. The Volcker Shock was by and large understood as the US state's submission to the discipline of international financial markets, being forced resultantly to deregulate financial markets (Cerny 1993b; Gill 1993; Helleiner 1994). The powerful force of international financial markets in the 1970s constrained and reduced the role of the state in 'the financial decision-making process' (Cerny 1993b:

171). For Stephen Gill, the Volcker Shock was an ultimate sign of how global financial pressures undermined the capacity of the US state to regulate economies (1993: 97–98). Erich Helleiner noted that the Federal Reserve's turn to monetarism was motivated by the desire to restore the confidence of international financial markets and foreign governments in the US dollar, which in turn depended on the ability of the US state to accept austerity measures. That is, the US state was no longer able to pursue its autonomous economic policy and therefore submitted itself to 'the discipline of international financial pressures' (Helleiner 1994: 133). The puzzling question, then, was why the US state, subject to the stringencies of global financial markets, was able to fall further into its current account deficits after the Volcker Shock.

More recent IPE literature has viewed the operational shift of October 1979 narrowly, as a project of 'finance capital', Wall Street or financial markets, with the intention of breaking the backbone of inflationary expectations, the power of labour (Panitch and Gindin 2008: 34). The Marxist position contrasting labour and capital was central in identifying how high levels of inflation decreased. It began with the Reagan administration's attack on labour unions, and eventually led to not only win the 'confidence of financial markets but also put itself [the US state] in the position to be able to tell other states to likewise address their own balance of class forces' (ibid: 33). Aside from the analytical and conceptual difficulties regarding 'finance capital', what seems ironic is that large commercial US banks would be massively exposed to Latin American debts if the monetarist turn had been implemented in 1979. Why was a high interest rate maintained in the face of its feedback costs not only to US labour but also to US 'financial capital'? The Marxist interpretation of the Volcker Shock was too narrow. Indeed, bringing inflationary pressures under control was an important facet of the Federal Reserve's goal. Contrasting with this Marxist interpretation, the Federal Reserve targeted big commercial US banks active in the US money and Eurodollar markets directly. The Federal Reserve intended to disrupt the money markets which were a core source of financial expansion.

The Volcker Shock was interpreted as 'a new kind of control [by the Federal Reserve] over the dynamic of financial expansion' (Konings 2011: 131). The Federal Reserve's turn to monetarism involved the process of reconfiguring 'the key parameters of the relation between the US monetary authorities, American finance, and global finance in a way that enhanced rather than diminished the infrastructural capacities and policy autonomy of the American state' (ibid: 132). Such reconfiguration was identified by: i) an acceleration of financial innovation and the undiminished growth of liquidity creation; ii) social and financial reforms, led by the Reagan administration, which made more options available to the financial markets; and iii) a political willingness to provide an expansion of the Federal Reserve's power over financial market governance, such as the 1980 Depository Institutions Deregulation and Monetary Control Act and the 1982 Garn–St. Germain Depository Institutions Act (ibid: 132–135). In consequence, the Volcker Shock's high interest rates sucked funds into the financial markets by 'transforming consumer price inflation into asset price inflation (ibid: 137). The monetarist turn therefore did not dampen inflationary pressures but 'made them more functional to US financial power' (Konings 2011: 139). In moving beyond the state versus market dichotomy, Konings provided a nuanced understanding of the monetarist turn as a process of institutional reconfiguration of US financial power.

Nonetheless, the Federal Reserve's new kind of control over the dynamic of financial expansion was not clearly explained. That is, the role of the Federal Reserve was passively seen as being only to reobtain membership by imposing universal reserve requirements on all depository institutions. It was rather the financial innovation of private banks which responded to the monetarist turn so that nothing changed in the way private banks conducted their financial business. The monetary shock further intensified financial innovation and expanded a liquidity-generating process by drawing money from the manufacturing sector to the financial sector. Indeed, there was no new kind of Federal Reserve control over the dynamic of financial expansion. Its specific role was not considered with

regard to the transformative process of the US dollar. As this thesis has argued, the dynamic character of the US dollar underpinned the dynamic of financial expansion. Interpreting the significance of the Volcker Shock as a process of institutional reconfiguration did not help to grapple with what the historical event meant to the US dollar and the Federal Reserve.

Whether the Volcker Shock led to an undiminished process of liquidity creation was debatable. To be precise, the US stock market began to attract various sources of funds only after double-digit inflation came down to around 5 percent (Greider 1987). It seemed more likely that the liability management of private banks would be disrupted by limiting the supply of bank reserves for two and a half years, even though the Federal Reserve obviously failed to control total reserves. That is, the Federal Reserve failed to control the steady growth of the monetary base. The recession of the US economy and world economy was at least a clear sign that the global *demand* for the US dollar was reduced in world economic activities. The Volcker Shock needs to be historicised in a way that deals with the dynamic process of US dollar creation. In this way the Volcker Shock can be seen a reassertion of monetary sovereignty over not only the US money market but the offshore money market as well. Thus, this chapter explores how the force of the money markets posed direct challenges to the dynamic nature of the US dollar and the Federal Reserve as a monetary authority. The significance of the monetary event lies in how the Federal Reserve coped with the challenge and extended its monetary authority beyond the US.

6.3 The Significance of Volcker Shock

The Volcker Shock was a reassertion of monetary sovereignty over the dynamic of global financial expansion, underpinned by the monetary process of transferable credit and debt relations denominated in the US dollar beyond the US market. The complex linkage between the force of the US and offshore money markets and inflationary pressures posed a challenge to the effectiveness of

Federal Reserve monetary policies. The monetary transformability between money and credit further complicated Federal Reserve procedures and discredited its traditional monetary policies – which in any case were not really having an effect on the dynamic money markets and inflationary pressures. The Volcker Shock was neither simply a submission of the US state to the power of global financial markets in order to re-establish confidence in the US dollar, nor a process of institutional reconfiguration more functional for US financial power. The historical event was the Federal Reserve's attempt to gain control over the key mechanism of global financial expansion: the dynamic force of the US money and the Eurodollar markets. The Federal Reserve aimed to break the complex connection between the dynamic process of US dollar production and inflationary pressures. In this sense, institutional changes termed 'financial deregulations', such as the removal of capital controls, worked to increase the effectiveness of the Federal Reserve's monetary policy to reobtain a monetary sovereignty over the dynamic of financial expansion. The Volcker Shock was a fresh step in the process of the Federal Reserve extending its monetary authority beyond the US market.

Throughout the 1970s there was a revolutionary growth of the US money market and the Eurodollar market. The dynamic process of creating US dollars in the domestic and international money markets contributed greatly to inflationary pressures experienced in the US. Unlike most economists who viewed the Euromarkets as a recycling mechanism, meaning that the net effect of the Euromarkets was small, Federal Reserve and Treasury officers were greatly concerned about the rapid growth of the Eurodollar market and its future impact on the Federal Reserve (Wallich 1979; Frydle 1979–80). For example, in the late 1970s the Euromarkets were growing rapidly at an annual rate of 25 percent, while American and German money markets, including CDs and time deposits, were growing at about 10 percent (Frydle 1979–80: 19). The growth of the Euromarkets between 1978 and 1979 would 'overtake the creation of domestic credit [money] within a foreseeable period' (Hawley 1987: 138). As revealed in Chapter 5, the practice of foreign central banks (following European central banks) in

accumulating and placing US dollar reserves in the offshore money market intensified the dynamic process of US dollar creation throughout the 1970s (McKenzie 1981; de Cecco 1987). According to McKenzie, more than 30 percent of official dollar holdings were placed in the Eurocurrency markets (1981: 123). From the late 1970s, oil-rich countries joined the process of US dollar creation by placing dollar reserves in the Euromarkets; in late 1978, for instance, Saudi Arabia 'began to sell its dollar reserves' (Spiro 1989: 464–466). The 1978 dollar crisis led the Carter administration to announce the November dollar package, including 'a $15 billion dollar swap with other central banks, provisions for the issue of up to $10 billion of "Carter bond" in foreign currencies and a $3 billion IMF drawing, and a tightened monetary policy' (BIS 1979: 135–137). The major source of *new* US dollar reserves was not only OPEC countries, but 'a considerable number of oil-importing countries' as well (BIS 1980: 109–110).

The November 1978 dollar package turned out to be short-lived because it did not tackle the core problem of the US dollar crisis: the excessive creation of US dollar liquidity. The expansionary tendency of the Eurodollar market continued, and double-digit inflation was increasing rapidly in the US domestic market. From early 1979, the US Treasury and the Federal Reserve began to initiate international coordination to regulate the Euromarkets. The suggestion of Anthony Solomon, Under Secretary of the Treasury for Monetary Affairs, was to impose requirements on Eurobanks' reserves to 'be deposited with the respective central banks' (Hawley 1984: 152). The attempted reserve obligation showed a clear concern over the expansionary tendency of the Eurodollar market as being a source of the dollar crisis. In April 1979, William Miller, then Chairman of the Federal Reserve, put forward the robust proposal that all BIS members be required to impose reserve requirements on Eurodollar deposits at their own banks operating offshore (Dale 1984: 27). However, this faced strong opposition from foreign central banks such as the Bank of England and the Swiss National Bank (ibid: 28), and from the US banking community (Helleiner 1994: 137). The proposal for Eurodollar reserve

requirements seemed to be practically infeasible (Hawley 1984). Henry Wallich, a Governor of the Federal Reserve, argued that reserve requirements would drive Eurodollar businesses from London to other markets and would initiate a new wave of financial innovations to the extent that 'over-expansion in all markets can be restrained only by sufficiently high levels of interest rates' (Wallich 1979: 21–24). Consequently, when the November dollar package was exhausted, 'Carter appointed Paul Volcker – a renowned "hard money" man who had been vice-president of the Federal Reserve Bank of New York since 1975 – to head the Federal Reserve Board' (Helleiner 1994: 133).

In the US domestic context, the dramatic expansion of the Eurodollar market and the US money market, combined with the second oil crisis early in 1979, contributed greatly to the tendency of inflationary pressures. That monetary disorder posed a challenge to the Federal Reserve's traditional monetary policy: interest-rate targeting through open market operations. The federal funds rate – the open market operation of the Federal Reserve for controlling short-term interest rates – was ineffective in the face of rapidly rising inflation in the late 1970s: in other words, the Federal Reserve's control over short-term interest rates was not making any difference to the dynamic process of the money markets. In fact, as a barometer of federal funds rates, the real return on Treasury bills (three months) in the late 1970s was negative before the October operational shift (Meulendyke 1998: 193). More importantly, '[t]he real interest rate on twenty-year [US] government bonds averaged only 0.6 percent when inflation was soaring in 1979' – well below in peace times (Greider 1987: 404). The daily purchasing and selling of US government debts for short-term interest-rate management was not having real effect on the deteriorating terms of dollar debt contracts in the 1970s. The bond market in corporate and government debts, in particular, were concerned about the creditworthiness of holding dollar bonds or issuing new dollar bonds. 'In midsummer 1979, the bond market was widely described as "moribund"' (Greider 1987: 34).

The complex links between the money markets and inflationary pressures went deeper than the economic cost and benefit of the inflated dollar. The monetary disorder of double-digit inflation indicated that the future prospect of issuing *new* US government debts was dismal, while at the same time the Federal Reserve's traditional monetary policy was no match for the force of the money markets. As discussed in previous chapters, the US dollar as US government debt was a key foundational debt for the monetary transformations of the US dollar as the secured practice of US money of account and the transferability of dollar-based credit and debt relations outside the US. US government debts' dismal prospects were directly linked to the declining capacity of the Federal Reserve as a monetary authority. During the 1970s, high interest rates and high inflation meant that the Federal Reserve was losing its capacity to maintain the credibility of the US dollar as world money. Without shifting gear, the Federal Reserve's traditional monetary policy could not control the complex linkage between the dynamic of the money markets and inflationary pressures. Thus, the core problem of the US dollar stemmed from the process of US dollar creation in the US money and the Eurodollar markets.

The Federal Reserve should have extended a monetary sovereignty over the dynamic of the Euromarkets in particular and sought a way to reobtain the substantive value of the US dollar by bringing inflation under control. In orthodox economics, the substantive value of money – its purchasing power – depends on the 'equilibrium' between quantities of money and goods. However, the exponential growth of the Eurodollar market and the US money market, independent of real economic activity, created a monetary disorder unprecedented in peacetime during which the substantive value of the US dollar sunk to a level unacceptable to the US state and society. The gloomy future of US government debts was not merely limited to the financing of US government deficits; government debt itself was key to the two valves of central banking: the discount window and open market operations. As the Federal Reserve's interest-rate policy was not having real effect on the

intertwined force of inflationary pressures and the money markets, it was failing to maintain the substantive value of money, crucial to its *raison d'être* as a monetary authority: maintaining the transferability of credit and debt relations, issued in the dollar, including not merely US private debts but more importantly US government debts as a foundational debt for the practice of US money of account and private dollar transferability across borders. The Federal Reserve should have acted to regain its firm control over the monetary forces. As the prospect of international agreement on the imposition of Eurodollar reserves faded away, and the Federal Reserve's control over inflationary pressures was declining, the US central bank decided to intervene directly into the money markets.

Paul Volcker, the new Chairman of the Federal Reserve, instigated an operational shift away from the traditional approach (managing the federal funds rate) to the direct targeting of total banking reserves. He aimed to control non-borrowed reserves, which included total banking reserves at the Federal Reserve and cash in member banks' vaults, but not borrowings from the discount window. Direct control over total banking reserves created extreme volatility in short-term interest rates in the US money market and the Eurodollar market simultaneously. After consulting with Federal Reserve officials, Peter D. Sternlight, Manager of the Open Market Desk, did nothing to reassure government securities traders as to 'what a proper interest rate was for a Treasury bill or a government bond' (Greider 1987: 128). It did not mean that interest rates were completely ignored, but the framing of widely fluctuating interest rates was intended to affect the way they were set by the market (as total banking reserves were targeted). The banks' confidence in interest rate calculation dissipated; they now needed to pay careful attention to the intentions of the Federal Reserve enunciated at each meeting of the Federal Open Market Committee. Thus, the October 1979 operational shift can be seen as the start of a process of the Federal Reserve reasserting itself as a monetary sovereignty over the money markets. Aiming to disrupt the interest-rate stability that the financial markets had found so comfortable, the resultant market uncertainty was intentional.

Towards the end of 1979, the unprecedented rise of US and Eurodollar rates was mirrored in the forceful rise of interest rates in such national financial markets as Germany and Japan (BIS 1980: 106). It seemed that German and Japanese central banks, instead of imposing restrictions on Eurodollar reserves, supported the Federal Reserve's attempts to control inflationary pressures stemming from the Eurodollar market (Greider 1987: 413). High interest rates in US dollars had a global impact on the rate of international loans. From the mid-1980s, highly unstable short-term interest rates intensified the uncertainty of the Eurodollar market and increased the debt burden of developing countries which had borrowed heavily from the Euromarkets during the 1970s. As discussed in the previous chapter, the rates of international loans lent to the developing world were adjusted every six months (Mendelsohn 1980: 66). High Eurodollar rates fed into the premium cost of international loans (BIS 1982: 6). From 1981, debts owed by developing countries started to be significantly rescheduled: 'more than $8 billion in commercial bank claims have been rescheduled, including more than $2 billion for Poland and more than $4 billion for Turkey' (Kreicher 1982: 20). At the same time, 1981 was also characterised by high interest rates in the industrialised world (BIS 1982: 4) – a general pattern initiated by the Federal Reserve's direct intervention. The exponential pace of creating US dollar liquidity was eventually lessened in the offshore market as the world economy experienced a global recession.

On the one hand, the industrial world's central banks supported the imposition of high interest rates (rather than Eurodollar reserve control) as a means of controlling the Euromarkets. During these times, they were less likely to place their dollar holdings in the markets. On the other hand, and unlike European and Japanese countries sensitive to dollar terms, oil-rich countries would be willing to denominate oil products in the US dollar and to maintain dollar reserves from oil sales since the Federal Reserve committed itself to controlling inflationary pressures. The 1980 Monetary Act re-imposed reserves (3 percent on CDs and Eurodollars) on those US banks bringing Eurodollars back to the US market (Kreicher 1982: 16). Whether this Eurodollar reserve obligation actually prevented US banks

from bringing them back to the US market was not obvious; if the Federal Reserve had been really determined to prevent Eurodollar borrowings, it would have imposed much higher reserve requirements (such as the 20 percent seen in 1971). The 3 percent reserve obligation indicated that the central bank hoped to reduce the less capitalised banks' tendency towards Eurodollar borrowings, yet was also concerned about discrimination against those US banks in favour of foreign banks in the Eurodollar market. This concern with potentially disadvantaged US banks and the desire to make the pressures of the Eurodollar market more manageable led to the creation of International Banking Facilities (IBFs) – offshore monetary space – in the middle of the Volcker Shock in December 1981 (Key 1982: 565

The creation of the new offshore monetary space in part reduced the pressure of the Euromarkets on the US market by instigating a spatial distinction between IBFs and the US monetary space. IBFs drew a certain amount of money away from offshore money centres during the early 1980s. The creation of IBFs was viewed as an attempt not only to compensate those who did not have access to the Eurodollar market in the context of monetary targeting, but also to reduce the effect of the Eurodollar market. The original plan for the IBFs was to restrict banking regulations such as detailed information of financial statements, transactions and owners of banks (Hawley 1984: 156). The Federal Reserve, however, due to the opposition of foreign central banks, their banks and US banks, modified the regulations but imposed other limitations which did not apply to foreign branches of US banks in offshore money centres. In particular, the Federal Reserve was concerned with 'the effect that the adoption of such [IBF] proposals would have on the conduct of monetary policy and competition among groups of US banks' (Key 1982: 566). As in the Eurodollar market, IBF banks were exempt from reserve requirements and interest rate ceilings.

The Federal Reserve put limitations on the activities of IBFs, differentiated from offshore money

businesses in several important ways. First, IBF depositing and lending was restricted to foreign residents; that is to say, IBF banks were prevented from lending to and accepting deposits from those resident in the US. The flow of funds between a US banking office and its own IBF was subject to reserve requirements. Second, limitations were placed on the maturities of deposits. Third, 'IBFs were prohibited from issuing negotiable instruments because such instruments could be transferred by the original holder to US residents who were not eligible deposit customers of IBFs' (ibid: 567). These limitations demonstrated clearly that the principal concern of the Federal Reserve was the possibility of money transferability between IBF accounts and US domestic banking accounts. In other words, monetary targeting of the growth of US banking reserves to reduce the capacity of bank lending was not only aimed at controlling the US monetary base but also extended to a limitation of monetary transferability between US monetary space and offshore money centres. Indeed, the creation of IBFs in New York attracted US banks from the US markets (Key 1982) and from tax havens such as the Cayman Islands and Nassau in the Bahamas (Strange 1986: 50).

The tight monetary policy of the Federal Reserve brought about global recession. As discussed above, international dollar loans lent to the developing world began to be rescheduled and increased the burden of debt financing. Global demand for the US dollar was costlier than before. The developing world's growing debt burden increased global struggles for having access to the US dollar in the US money market and the Eurodollar market. The creation of new dollar credit and debt contracts for business purposes became difficult with the rising costs of dollar borrowing. The US dollar as world money was not only costlier in numerical terms but moreover valuable in world struggles. Ironically the international debt crisis consolidated the position of the US dollar as world money. Before the Federal Reserve met (to some extent) the global demand for US dollars by loosening its monetary policy in mid-1982, it needed to bring inflation under control, but using the broken theory of monetarism. In other words, it had to abandon the assumed link between the monetary base and 'real'

economic activities.

For two and a half years, the Federal Reserve attempted to control total banking reserves by paying attention to the growth of the monetary base, called M1 as the basic measure. Two episodes – the summer of 1980 and the period between late 1981 and early 1982 – completely discredited the guiding measure of M1 as the controlling monetary aggregate. In April 1980, M1 was rapidly shrinking (FOMC 1980): 'More than $17 billion of America's money ceased to exist' (Greider 1987: 194). Federal Reserve officers were puzzled by the dramatic and unexpected decline in the money supply. It raised a new question: what should monetary targeting set the proper level of M1 to be? The Federal Reserve bought government securities and injected a huge amount of new money – $5.4 billion – into the banking system. From that point, M1 grew rapidly and bank lending also increased over the next few months (Greider 1987: 201–206).

In early 1981, the members of the Federal Reserve debated whether they wanted to go back to the federal funds target or stick with the monetary target. At the meeting in February, Federal Reserve policymakers decided to stick with tight monetary growth. There was, however, the dilemma of the setting the present monetary target in order to bring down inflation. Monetary targeting was necessary to at least prevent the inflation rate getting worse, but maintaining the target was imposing enormous costs on certain sectors of the US economy such as housing, the auto industry and auto-related sectors. As Anthony Solomon, Under Secretary of the Treasury for Monetary Affairs, said: 'These people [monetarists] who are saying that monetary policy can do the entire job of getting inflation down are just terribly destructive. I don't know how in the world we can get to that point; monetary policy alone just won't do it' (FOMC 1981a: 96). When the US economy fell into recession in the autumn of 1981, inflation suddenly fell below 6 percent, indicating that its double-digit rule was coming to an end (FOMC 1981b). Paul Volcker, however, was concerned with its possible return: a tight

monetary target was imposed at the October meeting. However, over the next few months, the supply of M1 surged rapidly – surprising, given it was not caused by an economic recession or a monetary policy change by the Federal Reserve. It was clear that the growth of M1 was not related to the activities of the real economy. Federal Reserve officials were convinced that they could not depend on the measure of M1 for monetary targeting. In the meantime, while the Federal Reserve's tight monetary policy led to the realisation that it could have a direct effect on the international money market and the global economy, important regulatory changes provided the US central bank with the extended role as the lender of last resort. That statement, however, requires modification in the light of the following: that is, how the process of financial deregulation, not the imposition of universal reserve requirements, improved the effective monetary policy of the Federal Reserve.

6.4 The Federal Reserve as a (Global) Monetary Authority

The Federal Reserve extended the role of lender of last resort beyond US banks. It opened access to the privileged world money – US government debts – to foreign banks as long as they were based in the US market, regardless of whether they were foreign branches or affiliates. The 1980 Monetary Control Act contained important regulatory changes which extended the role of the Federal Reserve as a monetary authority. The Act subjected all depository institutions to universal reserve requirements so that the Federal Reserve obtained an extended control over them. The monetary importance of this measure did not lie in the hugely increased total banking reserves at the US central bank; in fact, it was expected that total reserves would be about $15 billion down (Timberlake 1985: 100; Greider 1987: 160). Rather, the impact of the universal reserve requirement increased the costs of holding reserves, in particular for small banks and thrift institutions, whereas member banks increased their profits (Greider 1987: 160–165; Allen and Wilhelm 1988).

Since all depository institutions were subject to reserve holdings at the central bank, all US-based

foreign banks were entitled to access the discount window and borrowing privileges as Federal Reserve member banks. This held 'regardless of whether the institution [was] owned by US or foreign residents and regardless of whether it [was] a branch or affiliate of a foreign institution' (Guttentag and Herring 1993: 19). The privileged openness to the US dollar was particularly attractive to international banks operating outside their country of origin, since the US dollar at the US central bank was the most-sought US debt within money markets at home and internationally. As the tight monetary policy of the Federal Reserve brought about economic recession first in the US and then the world, that recession (following Weber and Ingham) intensified social struggles for economic existence so that the US dollar, in particular US government debts, became more valuable than before.

The comprehensive openness of the US central bank's discount window to all US-based depository institutions necessarily changed the conception of collateral for the supply of dollar liquidity. As discussed in Chapter 5, collateral of a troubled bank needs to be seen as sound, though often political, for the Federal Reserve to provide dollar liquidity immediately to the bank. The 1980 Monetary Control Act expanded 'the eligible collateral provision for Federal Reserve notes outstanding to include the fully guaranteed obligations of a foreign government or the agency of a foreign government as well as any financial assets that may be purchased by Reserve Banks' (Timberlake 1985: 99). Federal Reserve money could be issued specifically for political objectives or for rescuing any type of a financial institution, regardless of whether their collateral was regarded as suitable for Federal Reserve notes or open market operations. The expanded version of collateral provision for and privileged open access to Federal Reserve money further increased the attractiveness of US debts in the round, since the US dollar accessible to the central bank's discount window was important to the private practice of issuing dollar debts and transferring them outside the US market, while the Federal Reserve increased its potential burden for the supply of dollar liquidity in the future.

The immediacy of the Volcker Shock being felt throughout international money market was a salient demonstration of the extended role of the Federal Reserve outside US monetary space – with the practice of US money of account and the transferability of dollar-based credit and debt relations underpinning the system. The Federal Reserve's global role was not associated with direct control over international banks in institutional terms outside the US market; rather, the extension of its monetary sovereignty over the offshore money centre was revealed in its disruption of the valuation of private debts in the first place. At the same time, the US dollar, in particular US government debts, became more valuable in the context of US and global economic recession. The privileged access to the discount window of the Federal Reserve further contributed to the transferability of US dollar debts across national borders.

Financial deregulations helped the Federal Reserve to reobtain control over the process of monetary dynamics such as the transformability between money and credit and various monetary innovations. Indeed, throughout the 1970s, monetary dynamics produced interest-bearing moneys drawn on savings deposits, which kept outside of the traditional regulation of the Federal Reserve. Interest-bearing moneys, such as CDs and Negotiable Order of Withdrawal (NOW) accounts, were substitutes for demand deposits. Therefore, the 1980 Act phased out all government-imposed ceilings on different types of deposits such as time and savings. Credit and debt relations, denominated in the US dollar, were more transferable across different institutional accounts. That is, as financial markets became increasingly connected through the transferability of credit money, the value of private banks' assets and liabilities tended to be subject to what was happening in the interbank markets (the US money and the Eurodollar market) – a key source of funding for various investments such as the stock market. That is, the removal of governmental capital regulations led the money markets to influence other markets. The money markets were effectively disrupted by Federal Reserve monetary targeting.

Various private debts such as NOW accounts and travellers' checks were integrated into the category of M1 (Garfinkel and Thornton 1989: 36). The pace of transferability of money (demand deposits) and all time deposits, including CDs, was reduced from a maturity of fourteen days to seven days (Dale 1984: 29), weakening the difference between M1 and M3. It was clear that the process of monetary innovations expanded the scope of means of payment by diluting the categories of M1, M2 and M3. Thus, the Federal Reserve could not control the steady growth of M1. The basic measure of M1 was not functional or desirable for the purpose of controlling monetary aggregates. Innovations in private debts, especially as issued by banks, meant other private debts could be discharged in the expanded scope of their transferability. It did not mean, however, that they were replacing the role of final means of payment: direct tax payments. For example, money in a savings account needs at least one more transaction (a transfer to a checking account) to pay government taxes immediately; the saving account is not a transaction account, whereas checking accounts can be used directly to pay government taxes. The slight difference is what differentiates money from credit in terms of acting as a *final means of payment*, even though the effect of their use on the economy would be same.

The Federal Reserve maintained the pyramidal debt structure of the US monetary system: the US government debt was at the top, the bank debt in the middle and the non-bank debt at the bottom. The process of monetary dynamics between money and financial security expanded the role of private bank debts, in particular bank deposits, so that the middle section of bank debt was enlarged. That is, the banking system as a whole created a greater volume of dollar liquidity across different markets. Various private bank debts could not replace the essential feature of moneyness, US sovereign money of account, the practice of which was embedded in the capacity of the state to tax all types of economic and financial activities within the national monetary space. As has been mentioned, all of the innovative private debts could not perform final means of payment. A distinction between money and credit was still maintained as an important part of monetary governance. As discussed in Chapter 1,

the history of modern money development is closely linked to a process of integrating private bank debts into state currency: their acceptance within the fiscal system of the state as direct tax payments, and at the same time as a constitutive part of monetary governance, by the central bank.

In terms of the relationship between money and credit or financial assets, the interchangeability between bank credit money and financial securities was expressed by the price of liquidity premium; 'interest must be paid in proportion to the degree to which the security is comparatively less liquid than money' (Amato and Fantacci 2012: 20). That is, while the process of monetary innovations dramatically increased the transferability between money and credit, the increased degree of interchangeability between money and credit gave banks and financial institutions a heightened sensitivity to uncertain or unexpected changes like the Volcker Shock. Fluctuating interest rates, initiated by the Federal Reserve, made banks uncertain in calculating the price spread between deposits and loans. Money loaned to finance risky speculation on financial assets and commodities was charged with higher market interest rates. Therefore, financial institutions who speculated on financial assets and commodities like gold suffered enormously during the monetary shock period, much as ordinary people and small businesses did (Greider 1987).

Even though the Federal Reserve failed to control monetary aggregates, it used a firm hand with short-term interest rates through the daily buying and selling of US government debts in the money market. The relationship between the federal funds rate and the use of US government debts was not lost but firmly re-established. The banks' confidence in the valuation of their assets and liabilities plummeted with the volatile fluctuation of short-term interest rates, created by the Federal Reserve's total reserve targeting. Banks active in the interbank market now needed to pay careful attention to what was decided in each FOMC meeting. Thus, the inner processes of Federal Reserve monetary policy decision-making heralded a new dawn in its monetary governance.

6.5 The Return to the Traditional Monetary Policy

In the spring of 1982, the Federal Reserve faced three interlinked problems. First, the basic measure of M1 as a monetary target broke down as a result of the economic recession. From late 1981, M1 growth had been well above its target, even though the US economy fell into recession. This meant that the mechanistic relationship between money and real economic activity was fundamentally wrong: money was more than a neutral medium of exchange in facilitating real economic transactions. Second, the US economic recession would be made worse if the Federal Reserve tightened monetary policy. Third, the impending international debt crisis was rapidly developing with regard to Latin American countries (FOMC 1982a). Federal Reserve officers like Frank Morris, Anthony Solomon and Lyle Gramley, argued that the Federal Reserve must abandon monetary targeting regardless of what M1 or monetary aggregates indicated. From 1 July 1982, the Federal Reserve began to loosen its grip on banking reserves. As more money became available in the money market, interest rates decreased. Falling but still-high interest rates revived the financial markets, such as the stock market and the bond market (Greider 1987: 537). Summer 1982 was thus a turning point for the Federal Reserve when it decided to go back to the traditional monetary policy: the targeting of interest rates. The experiment of 'monetarism' was officially abandoned (FOMC 1982b).

The Volcker Shock transformed the US economy into the world's consuming economy by attracting foreign capital into the US government and mortgage debt markets. In Japan, whose banking sector had traditionally been protected and domestically oriented, the Ministry of Finance had been promoting the expansion of Japanese financial institutions with excellent international reputations since the early 1980s (Norville 1998: 117). The overseas branches of Japanese banks expanded from 299 to 913 between 1980 and 1988 (ibid). With the onset of the Latin American and East European debt crises, a huge amount of foreign capital flowed into the US market: $85 billion in 1983, $103

billion in 1984, $129 billion in 1985 and $221 billion in 1986 (Krippner 2011: 101). Japan supplied a high percentage of this foreign capital – that is, Japanese savings to buy US government debts (ibid). More importantly, from the early 1980s, Japan began to purchase US government agency debts such as 'mortgage securities issued by the Government National Mortgage Association (Ginnie Mae), the Federal National Mortgage Association (Fannie Mae), the Federal Home Loan Mortgage Corporation (Freddie Mac), and the Farmers Home Administration' (Duncan 2005: 106). Even though the Fannie Mae and Freddie Mac debt was not directly guaranteed by the US government, it was believed that the US monetary authority would intervene in the case of default (ibid: 107). A high percentage of foreign capital also came from foreign central banks in order to purchase not only US Treasury debts but also the US government-guaranteed debts. During the 1980s, surplus countries like Japan increased US dollar reserves dramatically (Duncan 2005). The shift of capital flows from the Eurodollar market into the US debt market indicated that the purchasing power of the US public (with the strengthening of the US dollar and the massive supply of money) enabled the US economy as a whole to become a world consumer society (Schwartz 2014: 70). After the Volcker Shock, the US economy fell into a deeper current account deficit, never experienced before. The US public was transformed into world consumers. The capacity of the US economy to sell various US debts seemed to reinforce the US dollar as the basis of financial globalisation.

6.6 Conclusion

This chapter has focused on the linkage between the US dollar as world money and the Federal Reserve, since the remaining essential feature of the US dollar as world money concerned the incapacity of the Federal Reserve to match the monetary dynamics of the US dollar outside the US market. The Volcker Shock was thus historicised with a focus on what it meant to the US dollar and the Federal Reserve as a monetary authority. The central argument was that the Federal Reserve obtained control over the

money markets, in particular the Eurodollar market (a key source of the US dollar problem in the 1970s), and established itself as a global monetary authority through its ability to dictate the terms of private bank debts in the US money market and Eurodollar market. In this regard, the historical significance of the Volcker Shock lay not in the submission of the US state to the power of global financial markets. As Konings (2011) pointed out, the Volcker Shock was a demonstration of a new kind of Federal Reserve control over financial dynamics in a broad sense, though, as discussed above, Konings's account did not specify this new control. The Federal Reserve was seen as a passive monetary actor, aiming only to increase Reserve membership, which did not actually directly translate into the further power obtained by the Federal Reserve in institutional terms. Rather, according to Konings, it was the process of financial innovation and the liquidity generation of private banks which *responded actively* to the monetary shock. Nothing changed in the way they produced liquidity and innovative private debts. Interpreting the Volcker Shock as a process of institutional reconfiguration did not aid the understanding of the specific role of the Federal Reserve as a monetary authority over the dynamics of financial expansion.

The significance of the Volcker Shock was in fact the way in which the Federal Reserve reobtained monetary authority over the dynamics of the US money and Eurodollar markets and their close linkage to inflationary pressures within the US domestic market. As this chapter has emphasised, the monetary event was indeed a reassertion of monetary sovereignty over financial globalisation, underpinned by the private practice of US money of account and transferable dollar-based credit and debt relations. In the late 1970s, the problem with the US dollar ran deeper than the inflated dollar. It was directly related to the declining capacity of the Federal Reserve since its traditional policy was not making any real impact on the linkage between the force of money markets and inflationary pressures. At a deeper level, the prospects for issuing new US government debt as a foundational debt for the transferability of private US dollar across borders was dismal. In sum, the problem of the US dollar was linked to the

Federal Reserve's *raison d'être* as a monetary authority. The central bank is a core constitutive component of developing dynamic modern credit money, as discussed in Chapter 1. It is a key monetary actor, securing the credibility of the US dollar not merely for the transferability of private debt contracts in financial markets but more importantly for the issuance of US government debts as a foundation for transferable private dollar contracts across borders and for the use of US government debts as monetary governance.

The challenge the Federal Reserve faced was how to break the complex linkage between the force of the money markets and inflationary pressures. The October operational shift to monetary targeting was thus a direct intervention of the Federal Reserve into the money markets. It intentionally framed a wide range of short-term interest rates. Banks in the interbank markets were no longer confident regarding the term of private debt contracts among themselves. As the interbank market – a core source of funding various financial investments – was disrupted during the monetary shock period, banks paid careful attention to what was decided at each FOMC meeting as a safe guide to the price difference between assets and liabilities. High interest rates eventually brought about the recession of the US economy and the world economy. While double-digit inflation came down, having nothing to do with the merit of monetarism, the direct intervention of the Federal Reserve into the Eurodollar market brought about the global reach of its monetary policy, the rescheduling of international dollar loans and the debt crisis of the developing world.

During the Volcker Shock, the Federal Reserve extended the role of last resort beyond the nationality of US banks. It opened access to US government debts as the most sought-after debt to any US-based banks, and also expanded the term of collateral eligibility for Federal Reserve dollar liquidity. Financial deregulations such as the removal of ceilings on various bank deposits worked in a way that they improved the new internal process of Federal Reserve monetary policymaking as a way of achieving

monetary governance over the transferability of private debts between the money markets and financial markets. The relationship between the Federal Reserve and the US money market and the Eurodollar market was firmly re-established. The US central bank established itself a global monetary authority beyond the US financial market and US banks. In this regard, the Volcker Shock was not the turning point which saw the US state being forced to deregulate financial markets, and subjecting itself to the latter. In fact, the US state needed such a process of financial deregulation to grasp control over the monetary dynamics of the US dollar in order to improve the effectiveness of Federal Reserve monetary policies as a means of implementing new monetary governance.

CONCLUSION

Financial globalisation, despite repetitive financial crises, has continued to expand. The existent IPE literature has explained the continued growth of global finance through three analytical lenses: the efficiency of financial markets, the interest of dominant states, and new private institutional developments. This thesis has argued, however, that the IPE accounts are incomplete because they do not take into consideration the monetary process of the seemingly fragile global finance. That is, the place of the US dollar in global finance is often recognised, but it remains only passive and a medium of exchange in real economic and financial transactions. Analysis of the US dollar as world money has been rarely considered an appropriate field of research enquiry to explain the convoluted world of global finance, since money remains understood as deeply grounded in the sphere of market exchange. As long as the orthodox conception of money as a medium of exchange in market transactions is accepted, money and finance are believed to be situated in different categories or fields of research enquiry. Orthodox characteristics of money necessarily lead to a conceptual framework in which the analysis of money is largely excluded from the process of financial globalisation.

This thesis has emphasised that money needs to be theorised beyond the sphere of market exchange. Theorising the nature of money as dynamic rather than passive opens the door to seeing the transformative process of the US dollar's development as the underlying mechanism of global financial development. In short, this thesis has attempted to give money a central place in understandings of the process of financial globalisation. To this end, this thesis has addressed the question of how the US dollar was historically constructed as world money through a series of developments that amounted to a process of monetary transformation. This thesis has argued that the rise of the dollar as world money was not understood, as is the case in economics and political economy, to result

directly from the strength of the US national economy, the political power of the US state, and associated market and institutional developments. That is, the rise of global finance may actually have resulted from the transformative process that gave rise to the US dollar as world money.

In analytical terms, this thesis has made two related moves. On the one hand, it has offered a revisionist history of the rise of the US dollar as world money, revisiting key moments and episodes in the history of the US dollar in order to untangle the inner monetary process of financial globalisation. Analytical chapters have thus examined the detailed process of the changing characteristics of the dollar well beyond commodity exchange. On the other hand, this thesis has been grounded in its contribution to the heterodox tradition of monetary thought and its conceptual framework, which emphasises three defining features of moneyness: money of account, the transferability of credit and debt relations, and the constitutive role of the state (especially central banks). Thus, by identifying and elaborating upon the three essential features of moneyness, this thesis was able to analyse the transformation that was crucial to making the US dollar world money in a way that opens out into a wider and deeper contribution to the study of money and finance.

By way of a specific contribution to the heterodox school of monetary thought, this thesis has sought to understand how the three defining features of money can be understood as operating somewhat differently when sovereign money circulates beyond its national monetary space. This thesis stressed, for example, that the process of new dollar creation in the Euromarkets involves a hybridised process of involving central banks, international banks, and nonbanks, which indicates that modern money creation is not only shared between the central bank and the banking system within the national monetary system, but it is also shared to some extent between central banks and international banks, especially when central banks hold transferable government debts, like those of the US government. When it comes to the concept of money of account, meanwhile, this thesis has opened up the analysis

of how this essential feature of moneyness can be developed in the international realm. A few scholars, like Einaudi (1953) and Ingham (2004a), have recognised that money of account can operate internationally, even though it is delinked from general means of payment represented by actual forms of money—money of account embedded in different ratios of pounds, shillings, and pence, which were derived from the Roman system, did not correspond to any circulating coins under the rule of Charlemagne (768-814) in post-Roman Europe (see 1.5.1 section in Chapter 1). That is, Roman money of account operated even when the Roman Empire collapsed. Like Roman money of account, US money of account is practiced outside the US monetary space, in particular through international monetary institutions. But, unlike Roman money of account, US money of account corresponds to the circulation of various US dollars. The point is that it can be possible for money of account to be practiced outside its sovereign and territorial space of origin. That is, the practice of US money of account can be delinked from various representative forms of the US dollar, such as coins, banknotes, bank deposits, and so on. What the US dollar did in the first place was provide a means of measuring intergovernmental debts and claims, therefore enabling European countries to settle their obligation not through the market but through a centralised monetary system known as the EPU during the 1950s.

However, one of the central assumptions of the heterodox theorisation of money offered by this thesis is that, ultimately, for any money to possess a dynamic modern character, it must combine each of the three essential features of moneyness. The establishment of the US dollar as an international abstract measure of value was an important monetary practice at the European government level, but it alone was insufficient to ensure the rise of the US dollar to world monetary status. The practice of US money of account could not create a dynamic process of monetary creation and transfers since it initially remained delinked from actual US dollars. Therefore, the emergence of the Eurodollar market was crucial to combining the practice of US money of account with the creation of different US dollar debts, in particular US government debts. It was through the Euromarkets, in short, that the US dollar as

world money took on the second essential feature of moneyness: dollar-denominated transferable credit and debt relations. The key actor in this particular monetary transformation was not the US central bank but foreign central banks holding US dollar reserves. That is, foreign central banks contributed to the hybridity of the US dollar by transferring dollar-based credit and debt relations in the Eurodollar market. This monetary transformation indicates that the creation of the US dollar as world money is not only shared between the US central bank and the whole banking system within the US national monetary system; it is also shared among the US central bank, foreign central banks, and international banks, including US banks in the international money market. Therefore, the US dollar as world money can be characterised by its institutionalised hybridity. As foreign banks issued various debts, denominated in US money of account, they shared the benefit of US money of account, which would help to transfer debts dynamically through different financial markets.

As emphasised above, however, the hybrid character of the US dollar in the Eurodollar market eventually depended on the public character of the US dollar as US government debts. The consistent practice of US money of account by private banks, active in the Eurodollar market, required the debt of the US government to be the most sought-after debt to hold onto in case of market uncertainty, as in the case of a liquidity crisis. As Ingham (2004a) argued, the emergence of modern credit money was a hybridised process that integrated private bank debts into state currency and the fiscal system of the state. In this monetary transformation, the creation of transferable government debts was a foundational base for the general acceptability and transferability of bank credits, such as banknotes and bills of exchange, within the British monetary space. In the Eurodollar market, meanwhile, the emergence of the US dollar as global money involved a hybridised process not of integrating private debts into the fiscal system of the US state but of creating new debts expressed in US money of account—a creation of new US dollars not necessarily part of the fiscal system of the US state, as long as these dollars stay outside of the US monetary space.

Ultimately, for the US dollar to operate as world money, a further transformation was required for it to hold the third feature of moneyness on a world scale. As discussed in Chapter 1, money of account cannot be created by private actors, only by the authority of the state. Thus, as more debts became denominated in US money of account, the dynamic process of dollar debt creation in the Eurodollar market drew the Federal Reserve to intervene and obtain control over the international money market. As detailed in Chapter 6, the dramatic monetary policy of the Federal Reserve under Volcker influenced the valuation of assets and liabilities of international banks in the Eurodollar market, since the transferability of credit and debt relations was largely underpinned by US money of account. In this regard, the growth of global finance, largely underpinned by the US dollar, extends the role of the Federal Reserve as a world monetary authority.

It is through the relation of two analytical moves—a revisionist history of the rise of the US dollar as world money, which is grounded in a contribution to the heterodox tradition of monetary thought—that this thesis arrives at its overall argument: the rise of the US dollar as world money was a process of monetary transformation that occurred relatively independently of the strength of the US national economy, and it was historically constituted through four key developments. Crucial to the emergence of the US dollar as world money was the establishment of its status as money of account outside of the US monetary space. US money of account was the operational unit of account of international monetary institutions born of the 1944 Bretton Woods Agreement. The fixed rate between gold and the US dollar was expressed as US money of account. In particular, however, the abstract US dollar unit was further used through the operation of the EPU. The claims and debts of European member states in the EPU were expressed and finally settled through the shared dollar unit. At the same time, however, this development certainly did not amount to the kind of monetary transformation that was necessary for the US dollar to play the role of world money. During the late 1940s and throughout the 1950s, the US dollar did not display the other essential features of moneyness that it only later

established internationally.

The second key development that contributed to the transformation and rise of the US dollar as world money centred on the transferability of dollar-denominated credit and debt relations, which first took hold in the Eurodollar markets during the 1960s. Moreover, the development of transferable dollar-denominated claims and obligations turned on the adoption of particular practices by European central banks. European central banks started placing a significant proportion of their US dollar reserves directly or indirectly in their commercial banks in the Eurodollar market. The dynamic source of US government debts created US private dollars, which were readily accepted and transferred by international banks. Thus, the expansionary force of the Eurodollar market attracted ordinary US dollars from the US monetary space and other US dollars from the rest of the world. The production of the offshore dollar was a hybridised process in which foreign central banks, holding US government debts, interacted with international banks, while the scope of US money of account was further expanded by denominating dollar debts and transferring them internationally through the offshore money market.

A third key set of historical developments—the breakdown of the Bretton Woods system at the outset of the early 1970s—served to deepen and widen both the role of the US dollar as international money of account and the transferability of dollar-denominated credit and debt relations. The end of the link between gold and the dollar as international money of account led to the belief that the practice of dollar denomination in issuing debts was a safe institutional practice in unstable global finance. In particular, US government debts were regarded as the most sought-after debt. The end of the Bretton Woods system caused foreign central banks, including Japan and oil-rich countries, to start accumulating US government debts dramatically, which provided the US dollar the two essential features required for it to be world money of account and thus the world's high-powered money. That

is, the end of the Bretton Woods system strengthened the US dollar as world money. Furthermore, the new hybrid forms of money, CDs in particular, contributed to the revolutionary development of the US money market and the already dynamic Eurodollar markets throughout the 1970s.

Understanding the collapse of the Bretton Woods system as a dynamic process of monetary transformation clearly shows how the literature of IPE narrowly views the US dollar in the post-Bretton Woods era. For example, Dooley et al (2004) regard the post-Bretton Woods era as 'Bretton Woods II', which is seen as a repetitive pattern of the structural relationship between the US dollar as a global reserve currency and the interest of export-oriented countries to maintain competitive values of their exported goods by way of dollar accumulation. Export-oriented countries use dollar reserves as a means of obtaining stable exchange rates between their currencies and the US dollar or as a means of undervaluing their currencies against the US dollar. It cannot be denied that the politics of exchange rates is an important aspect of international monetary relations in the contemporary world economy. As discussed in Chapter 5, however, regarding the post-Bretton Woods era as Bretton Woods II is extremely similar to the interpretation of the end of the Bretton Woods system as the politics of exchange rates, on which the centrality of the US dollar was placed. That is, characterisation of the US dollar primarily as 'a central standard' in floating exchange rates not only overlooks an important development of global financial markets at the end of the Bretton Woods system, but it also leads to the perception that the US dollar in Bretton Woods II has remained essentially the same as during the Bretton Woods era. The important features of the US dollar as world money are simply reduced to a monetary anchor for other national currencies; indeed, the anchoring role of the dollar is believed to derive from an 'exchange standard,' which is historically equated with 'a standard commodity' (Ingham 2004b: 174). Thus, the conception of the US dollar's exchange standard does not have a direct link to the three essential features of the US dollar. Instead, the anchoring role of the dollar may be found in the essence of the dollar as a way of expressing debts in the first place, as will be explained below. The

discourse of Bretton Woods II does not recognise the dynamic character of US dollar reserves and neglects the fact that US government debts are foundational for financial globalisation, which is relatively independent from the real world economy. As this thesis has showed, the key essence of money does not lie in the exchange of commodities but in measuring credit and debt relations and transferring them across societies and borders. In this regard, this thesis maintains that understanding the post-Bretton Woods era requires revisiting the end of the Bretton Woods system.

As discussed in Chapter 5, the end of the Bretton Woods system in 1971 is historically significant because it was a process of monetary transformation, which was well underway in the 1950s and 60s. The importance of the breakoff between gold and the US dollar cannot be adequately understood via a narrow conception of the latter as an exchangeable commodity or standard for other national currencies. Rather, US government debts, as the US state's promise to pay, became a foundational pillar not only for the transformation of the US dollar into world money but for the rapid growth of privatised global finance as well. That is, the market practice of US money of account was transformed into an institutionally secured practice: debts were issued in the abstract dollar unit. The market practice of US money of account was further reinforced by the dramatic accumulation of dollar reserves by a number of foreign central banks. As they placed dollar reserves in the Eurodollar market, the Eurodollar market created a dynamic process of transforming the public character of the dollar into private dollars, which were readily acceptable for international banks. The new development of bank credit money, such as CDs, intensified the hybridised process of US dollar creation, involving both the public and private dollar. Thus, the end of the Bretton Woods era transformed the US dollar into world money and the key underlying mechanism of financial globalisation. The puzzling phenomenon of the continued growth of global finance in the post-Bretton Woods era, despite repetitive financial crises, can be explained by the dynamic character of the US dollar as world money. In particular, US government debts are foundational for the transferability of private credit and debt relations across

borders.

This thesis has argued, meanwhile, that the monetary transformation that gave rise to the US dollar as world money also required the establishment of the US central bank as a world monetary authority. The Volcker Shock was the key moment during which the Federal Reserve began to develop its capacity to deal directly with the force of the US money market and the Eurodollar market, especially as they contributed to inflationary pressures. The traditional monetary policy (interest rate targeting) of the Federal Reserve was not having an effect on the linkage between the money markets and inflationary pressures. Instead, the central bank intervened directly in the money markets by targeting total banking reserves. This monetary policy shift created dramatic market uncertainty in the form of highly unstable interest rates between October 1979 and mid-1982. The impact of the unprecedented monetary policy of the US central bank was felt immediately throughout the US and international money markets, since they both shared the US dollar as world money of account. Banks active in the interbank markets were then forced to pay great attention to what the central bank intended to do due to the uncertain nature of determining interest rates. High inflation was brought down with the recession of the global economy and the US economy. The Federal Reserve established itself as a world monetary authority over the dynamic money markets. In addition, it opened privileged access to US government debts for any US-based banks, regardless of who owned them, and expanded the term of eligibility for acceptable collateral as a guarantee of liquidity supply in the uncertain future.

This thesis has argued that the rise of the US dollar should be seen neither as a natural process of the US's real economic expansion nor as a direct consequence of the political power of the US state; instead, the US dollar's rise should be viewed as a process of monetary transformation, which was constituted by four dynamic developments. The dynamic character of the US dollar can be understood only if the key quality of money goes beyond the sphere of real economic transactions. In particular,

the development of the dynamic US dollar, which underpinned the rapid expansion of the Eurodollar market, required the practice of US money of account and a crucial source of US government debts, supplied by foreign central banks. This created a historically unique process of US dollar creation, which was further intensified by the new hybridity of bank credit money, such as CDs. Thus, the dynamics of the Eurodollar market and the US money market were the core foundation for the dramatic rise of global finance in the 1970s. The so-called financial revolution, generally associated with the end of Bretton Woods, was made possible only by the revolutionary force of the interbank markets through which the practice of US dollar denomination was shared, and various dollar debts tended to be much more widely transferable than other debts, which were denominated in other national moneys of account. That is, private bank debts, denominated in US money of account, possessed the capacity for their wider transferability through the international money market. But, the most dynamic source of the US dollar rested on US government debt, which was a foundational source for the rise of the US dollar and for the key inner mechanism of global finance as well.

Implications and Questions for Future Research

In order to close this thesis, it is important to recognise how a historical analysis of the rise of the dollar has important implications for contemporary debates about the Federal Reserve, the centrality of the dollar, and various theories of monetary creation. The first section briefly discusses what the unprecedented role of the Federal Reserve means in the recent global financial crisis. The next section highlights how the debate around the contemporary role and characteristic of the US dollar remains under theorised. More specifically, an attempt is made to reframe the debate with reference to the three conceptual aspects of the dollar. The final section discusses the processes of monetary creation.

Reflecting on the recent global financial crisis, an unprecedented amount of dollar liquidity, 'injected' by the Federal Reserve, has been described as unconventional and nonstandard, since the US central

bank supplied a massive amount of liquidity not only to US banks but also to nondepository institutions and foreign central banks on 'a heroic scale' (Bowman et al 2013: 457). While the central bank did not have a coherent process of policy measures to grapple with the nature of the crisis (Amato and Fantacci 2012; Langley 2015), the unusual act of the Federal Reserve was in particular associated with 'balance sheet policies': the central bank used its own balance sheet to modify the balance sheets of the private sector by purchasing illiquid private securities (Bowman et al 2013: 466). That is, the Federal Reserve purchased a huge amount of illiquid private assets through open market operations and discount window facilities through which US government debts—US Treasury bonds and central bank reserves—were provided for the money market as well as the nonbank sector and foreign central banks. It appears that the massive 'injection' of US government debts into markets is seen as a monetisation of debt.

To be fair, this is not the first time central banks have involved the modification of collateral maturity and the purchase of illiquid financial assets from nondepository institutions. There is nothing to prevent the central bank from purchasing financial assets from the nonbank sector (Buiter 2008; Ryall-Collin et al 2012). For example, during the 1997-8 financial crisis, the Bank of Korea provided emergent loans through quasi-public banks to manufacturing companies and held their collateral. The eligibility of access to Federal Reserve discount window facilities was already expanded, including US-based foreign banks and financial institutions, in 1980, as discussed in Chapter 6. The US central bank previously engaged in saving the American hedge fund Long-Term Capital Management (Mackenzie 2007). The recent financial crisis seems to highlight the global role of the Federal Reserve in financial crisis governance, which goes well beyond being a traditional last-resort lender.

Apart from the Federal Reserve's practice of unconventional monetary policies, however, its role in the financial crisis shows how global financial markets are dependent on US government debts in a deeper

sense. The unconventional measures of the central bank, such as outright purchases of illiquid financial assets, show that its tradition of being a last-resort lender through increasing reserves of banks was not working in transferring bank credit money across markets and societies. That is, the injection of liquidity did not translate smoothly into the process of bank credit money creation. In this regard, the Federal Reserve was required to act as 'a [global] market maker of last resort' (Buiter 2008). Unlike the Bank of Japan, whose monetary policy aimed at reserve expansion in a traditional sense of last-resort lending, the Federal Reserve aimed specifically at bank credit money creation so that its unconventional measures would have banks begin the process of monetary creation (Ryan-Collins et al 2012: 81). The Federal Reserve actively intervened to transfer limited social relations of dollar-denominated debts (illiquid private debts or financial securities) into saleable or transferable private debts in global financial markets. The Federal Reserve's unconventional measures can be seen as new central banking mechanisms to deal with financialised global economy, underpinned by the three monetary characteristics of the US dollar as world money.

As discussed in Chapter 1, the emergence of modern credit money was a hybridised form of combining private bank credit and state currency. In this monetary transformation, government debts were foundational for the transferability of credit and debt relations, denominated in sovereign money of account. Understood in this way, unconventional interventions of central banks 'cannot be fitted into the classical categories in which the juxtaposition of state and market is couched. In other words, it is not a matter of seeing the market, and the financial market in particular, as something to be regulated by the state' (Amato and Fantacci 2012: 9). The root cause of the crisis was a crisis of liquidity no longer available in the financial markets (Amato and Fantacci 2012). The liquidity of financial markets depends on the money markets: '[I]n economics, liquidity indicates "the interchangeability of assets and money." Therefore, speaking of an asset, liquidity consists in its prompt convertibility into money' (quoted in Amato and Fantacci 2012: 19-20). During the growing expansion of financial markets, the

interchangeability between money and credit (financial assets) worked smoothly, but the interchangeability between money and financial assets came to a sudden halt at the moment of the crisis. The transformability of bank credit money into financial assets, as discussed in Chapter 5, is not about a process wherein financial assets equal money. Banks can provide more money at a given capital. The pyramidal debt structure of the national monetary system is maintained, and the distinction between money and credit is crucial to modern monetary governance. That was why the Federal Reserve was able to establish control over the dynamic of the money markets in the early 1980s. The interchangeability between money and credit cannot transform the latter into the former.

In this sense, the contemporary crisis can be seen as a key moment of monetary distinction between money and credit. Previously liquid financial assets are no longer easily cashed, and money is not spent or lent in the market. Money becomes more valuable. In particular, US government debts, provided through open market operations or discount window facilities, remains the core mechanism of global finance. That is, US government debts are foundational for the transferability of credit and debt relations, including bank credit money and financial assets, denominated in US sovereign money of account. The governance of the recent financial crisis shows clearly that the monetisation of public debt is a key inner mechanism of producing and transferring modern bank credit money, but the traditional way of monetising public debt is no longer held. The process of creating bank credit money no longer entirely depends on reserve expansion of the banking system; it depends on how the central bank implements unusual monetary measures beyond the banking system in the post–financial crisis era.

As this thesis has shown, the rise of the US dollar as world money extended the growing role of the Federal Reserve as a monetary authority over international money markets, underpinned by the US dollar. Thus, the unprecedented scale of the Federal Reserve's lending reflects the global role of the

US dollar and the role of the Federal Reserve as a global monetary authority beyond US banks. According to McDowell (2012), the Federal Reserve during the recent crisis provided emergent dollars to international banks through the establishment of swap lines with foreign central banks. The massive injection of US government debts either through open market operations or discount window facilities institutionalised the three essential monetary characteristics of the US dollar as the underlying mechanism of global financial stability. That is, transferable US government debts like US Treasury bonds and Federal Reserve money were crucial to the market practice of the US dollar as a world measure of value and as cross-border transferability of dollar-denominated debt. If the monetary link between US government debts and global financial stabilisation is accepted, it begins to make sense why the Federal Reserve was required to go well beyond being a traditional last-resort, as it stabilised global financial markets. The Federal Reserve as a global monetary authority not only should provide emergent loans to the money markets to help the transferability of bank credit money to the financial market and the real economy, but it also should act as a market maker of global financial markets, which are in turn linked to the prospect of financing future US Treasury bonds.

Federal Reserve governance of the financial crisis transforms itself into a '[global] dealer of last resort' (Mehrling 2011: 10). The Federal Reserve even provided 'value discovery mechanisms' for illiquid private securities (Buiter 2008). As the US central bank has engaged in the process of transforming limited credit and debt relations (illiquid private debts) into transferable credit and debt relations (saleable and marketable private debts), it has developed new mechanisms to make the transferability of private debt contracts by intervening in different markets beyond the money markets. The role of the Federal Reserve as a last-resort has expanded to cover various financial institutions and foreign banks as well. The Federal Reserve plays an active role in the 'making' of global financial markets, precisely because the markets are dependent on US government debts as world money.

The unprecedented supply of US government debts may not be likely to put a financial burden on the capacity of the US state to pay interest rates on US Treasury securities if the Federal Reserve is able to enlist market actors to give low long-term interest rates. Even though the Federal Reserve can dictate Federal Funds rates in the interbank market, it cannot control future long-term interest rates for various governmental and corporate bonds. As Hall (2008) notes, long-term interest rates are largely dictated by actors in the bond markets. In order to avoid miscommunication between its intentions and market actors' expectations, the Federal Reserve relies on transparent transmission of monetary policies to communicate with the bond market. The Federal Reserve's transparent communication is a way of building 'intersubjective expectations' between the Federal Reserve and bond markets (Hall 2008: 13). The historically low interest rate implemented by the Federal Reserve, along with other major central banks, is likely to reduce the financial burden on the US state's interest rate payments. That is, foreign central banks and private actors are willing to purchase US Treasury bonds at even low interest rates. Simply put, US Treasury bonds are the most transferable debt across global financial markets. Through the institutionalisation of global financial markets, underpinned by transferable US government debts, the global role of the Federal Reserve would further grow in the post–financial crisis era.

Regarding future research avenues relevant to the contemporary role of the Federal Reserve as a global monetary authority, it would be interesting to explore the transformation of the Federal Reserve from an international last-resort lender to a global market maker beginning in the early 1980s, during which the Federal Reserve established itself as a global monetary authority over the international money markets. For example, how the role of the Federal Reserve has been extended from the debt crisis of 1980s to the 1997–8 Asian financial crisis and the recent crisis. The meaning of open market operations or discount window facilities may require reconsideration. Rather than simply monetisation processes of public debt, as economists typically tell us, both open market operations and discount window

facilities constitute an important part of global financial stabilisation, underpinned by transferable US government debts for the global money market as well as the global financial market. According to Hall (2008), credible central banks are likely to use open market operations as a way of building 'intersubjective expectations' between central bank intentions and market actors' expectations in the bond markets. That is, Federal Reserve open market operations can be seen as monetary and financial processes at the same time.

The recent financial crisis has triggered renewed debates on the trajectory of the US dollar in global political economy. Economists have never been hesitant to predict the future of the US dollar since the end of the Bretton Woods system. About twenty years ago, economists, in the context of Japan's rapid economic growth, predicted that the dollar would be inevitably displaced by the Japanese yen (Hale 1995; Kindleberger 1995). The weakness of the US economy, characterised by persistent large current account deficits, posed a direct threat to the US dollar (Krugman 2007). The recent financial crisis is similarly understood as heralding a transitional process in which the decline of the US dollar is already taking place (Eichengreen 2011). Economists have been so long mistaken in understanding and characterising the trajectory of the US dollar. There is no need to engage extensively with the economic assessment of the current status of the US dollar. As this thesis has demonstrated in different historical case studies, one primary reason for economists' misunderstanding of the dollar lies in their conceptualisation of money as a medium of exchange in real economic transactions. The puzzle of the sustained US dollar, despite the relative decline of the US economy, has led to a reformulation that stresses incumbent advantages (McKinnon 1998; Greenspan 2001).

Some who ground the fundamental understanding of money in economic functionality emphasise that the world economy is based on 'a dollar standard' (Oately 2014: 54). Two outstanding features of the contemporary dollar standard is its role as a dominant currency unit in which internationally traded

goods are priced and as an 'exchange standard' for the external value of other national currencies. It then follows that foreign governments accumulate dollars as foreign exchange reserves (ibid). Accepting the notion of incumbent advantages, Oately explains why the dollar was sustained during the recent financial crisis (2014).

As discussed above, Dooley et al (2004) emphasise the structural relationship between dollar accumulation and export-oriented Asian countries' way of undervaluing their currencies against the dollar. Thus, similar to Oately, the important feature of the US dollar is its anchoring role in the external value of other currencies. As both the US and Asian countries have a mutual benefit from the imbalance of trade, because the US can borrow by opening its market to those countries, which in turn sell their goods and purchase US government debts (Dooley et al 2004), the demand for and supply of the US dollar explains how the dollar has been sustained. Even though the role of the US dollar as a way of managing exchange rates plays a part in why Asian countries accumulate US dollars, the monetary anchor of the US dollar as an exchange standard does not have a firm conceptual ground. Even if there is such an international exchange standard at best, the monetary anchor of the dollar alone cannot explain the whole aspect of contemporary dollar accumulations in the world economy, as will be discussed below after a geopolitical approach to the dollar debate.

Others have been sceptical about the future trajectory of the US dollar. Grounded on geopolitical relations, they have argued either that the dollar is in decline due to changes in political foundations (Calleo 2009; Kirshner 2009), or that the dollar is in a transitional process from being a top currency to a negotiated currency due to deteriorating US economic factors (Helleiner 2008, 2009; Ostero-Iglesias and Steinberg 2013). The former position is more sceptical about the future of the dollar because the political support for dollar holdings no longer comes from US allies and instead comes from countries like China. Following Strange's taxonomy of various international currencies, as discussed in Chapter

2, the latter position argues that the dollar is gradually shifting from being a top currency to a negotiated currency. That is, the relative decline of the US economy is making the dollar lose market attractiveness for private actors, so the dollar is becoming more dependent on the political support of foreign governments. The reason for dollar holdings at foreign central banks is becoming less relevant to economic considerations (Helleiner 2008, 2009). Ostero-Iglesias and Steinberg (2013), for example, develop Helleiner's hypothesis to explain how the dollar is increasingly seen as a negotiated currency in the perception of financial elites in three regional case studies, China, Brazil, and the Gulf cooperative states. On the contrary, Doug Stokes (2014) asserts that the dollar continues to remain dominant due to various reasons, such as the US liquid financial market and its strategic capability in East Asia. The accumulation of dollar reserves at foreign central banks, whether dollar pessimists or optimists, is believed to derive from geopolitical reasons, such as security ties.

The contemporary dollar debate needs to be reframed in such a way that three relevant conceptual points of the dollar as world money—the meaning of the dollar standard, the characterisation of dollar reserves, and the nature of 'exorbitant privilege'—can be revealed. The notion of the contemporary dollar standard as a dollar-centred exchange rate system is generally accepted (Dooley et al 2004; Ostero-lglesias and Steinberg 2013; Oately 2014). Since money is typically characterised as a medium of exchange, a store of value, and a unit of account, the dollar standard of the world economy exactly reflects these three economic functions in three respective spheres: foreign exchange reserves, international trade, and exchange rates (Oately 2014). In particular, the US dollar as a monetary anchor for other national currencies characterises the core aspect of the contemporary dollar standard, since the anchor of the dollar encourages other states to accumulate dollar reserves as a way of managing stable exchange rates. Thus, the dollar is seen as an exchange standard that other countries refer to in order to manage the external value of other currencies. What is the essential feature of the dollar as a monetary anchor in exchange rates? It is not obvious if dollar reserves, used for exchange rate

management, need to be regarded as the function of a medium of exchange or a store of value or a unit of account. In economics, a medium of exchange works in the exchange of commodities, and a unit of account prices commodities for international trade. These economic functions of money do not fit comfortably into an economic understanding of dollar reserves at foreign central banks. These reserves are typically regarded as a store of value, since dollar reserves are held by foreign central banks. However, the reserves are at the same time used by foreign central banks to intervene in foreign exchange markets. It is not clear about how to characterise US government debts in terms of the essential qualities of the dollar.

To be more precise, US dollar reserves held at foreign central banks may contain the dollar in different forms, like banknotes and Treasury securities. The dominant form of dollar reserves is US Treasury debts, like Treasury bills and bonds. Foreign central banks can use different forms of the dollar to intervene in foreign exchange markets. These different forms all are indeed US government debts, denominated in US sovereign money of account and situated at the top of the pyramidal debt structure in the US monetary system. As discussed in Chapter 5, the significance of the end of the Bretton Woods era in part lay in the market practice of US money of account regarding issuing debts in the first place in the global money market because the market practice of US money of account was regarded as an institutionally secured practice, even though the external value of the dollar fell deeply compared to the value of other major currencies during the early 1970s. Therefore, foreign banks joined the denomination rent when issuing debts. US money of account thus measured credit and debt relations and enabled a comparison of the price list of commodities. What features the dollar as a monetary anchor may be the abstract quality of US money of account as the world's practice of expressing and transferring debts through the foreign exchange markets. Thus, if the link between US money of account and US government debts is established, it makes sense why foreign governments continue to accumulate dollar reserves in the dynamic of global financial markets, in particular foreign exchange

markets, even though Asian export-oriented countries like Japan, South Korea, and Taiwan are depending less on the US market and more on the Chinese market.

Furthermore, a geopolitical approach alone cannot completely explain contemporary dollar accumulations. What is not considered in the dollar debate is the dynamic character of dollar reserves as the most sought-after debt or the most transferable debt in global finance. During the 1960s, the dollar might have fallen into being a negotiated currency due to the political support of foreign governments, not economic considerations (Helleiner 2008; Otero-Iglesias and Steinberg 2013). During the same decade, however, the dollar was rapidly developing its dynamic characteristic of transferring credit and debt relations, not through the US central bank but through foreign central banks with their own dollar holdings. The continued accumulation of dollar reserves is closely linked to the dynamic growth of international and national money markets. As this thesis has showed, US government debts, as the most transferable debts, are the foundational base for the process of financial globalisation, which is relatively independent of the process of the real world economy. The recent financial crisis does not lead to a weakness of dollar hegemony in the global money market (Cohen and Benney 2014).

The 'exorbitant privilege' of the dollar, primarily predicated on its aforementioned role as a monetary anchor in exchange rates, is seen as a monetary source of US financial power, since it enables the US state to finance US debts and run large current account deficits without the cost of domestic adjustments. In this way, the capacity of the US state to finance US government debts is interpreted as the ability to *borrow* from the world (Cohen 2006; Schwartz 2009; Oately 2014). However, as this thesis emphasises, money cannot be theorised entirely on real economic transactions and also constitutes credit and debt relations. Thus, global imbalances are expected, so large current account deficits of the US economy can be seen rather as a sign of the global role of the dollar, which in turn

brings the extended role of the Federal Reserve as a global monetary authority, as reflected in the recent financial crisis. The financial capacity of the US state lies in its capacity to *issue its debts*, widely accepted and transferable to foreign central banks and private banks. Transferable government debts, either accumulated at foreign central banks or traded in the international money markets, can reinforce the transferability of private dollar debts denominated in US money of account across borders. The US capacity to issue widely transferable government debts also lies, as Ingham (2004a) notes, on a 'sophisticated balance of power' among administrative executives, congress, and taxpayers. In this regard, the potential for the rise of Chinese currency appears to be weakened.

The contemporary dollar debate needs to go beyond the narrow conceptualisation of the international monetary system, which seems to be distanced from the dynamics of financial globalisation. The debate should take into consideration how the US dollar as world money constitutes dynamic credit and debt relations in global financial markets. Thus, the characterisation of financial power (i.e. Strange 1986; Helleiner 1993; Germain 1997; Langley 2002), somewhat distanced from monetary power, cannot help grapple with power configurations of the global political economy. For instance, a number of IPE scholars recognise the rise of BRICs (Brazil, Russia, India, and China) in financial terms, against US financial power, which was challenged by the recent crisis. In particular, China as a creditor has provided international credit to developing countries. Its influence on countries has been enhanced. There is no denial that China has more financial muscle to be used for political purposes in international relations. The financial power of the Chinese state has been seen to rise rapidly in terms of international *financial relations* (Helleiner and Kirshner 2014). The key character of Chinese financial power lies in its status as an international creditor. Contemporary questions about the emerging powers of the BRICs and the US's financial power seem to be remarkably similar to questions posed in the 1980s, during which US financial power was seemingly challenged by its falling into its current account deficits, while Japan, as a creditor, was rising as a financial power. Thus, the recent financial

crisis has produced a comeback idea of financial power as creditor status. The character of contemporary US financial power cannot be separated from the global hybridity of the US dollar as the underlying mechanism of financial globalisation, to which foreign central banks and their respective commercial banks have contributed.

The final implication of this thesis for contemporary debates about the dollar relates to 'a post-crisis revival' of interest in the process of monetary creation. In economics, there are two contrasting theories of monetary creation: exogenous versus endogenous money. The process of exogenous money creation begins with reserves, or base money, at the central bank. Reserves, initially increased by the central bank, lead the banks to begin lending out money. This exogenous model assumes that reserves or base money would move first and factor into the banks' lending. Thus, the key actor for creating new money lies in the state. It follows that, when the state implements expansionary fiscal policies or attempts to bail out banks in times of financial crises, the central bank issues new Treasury bonds or opens discount window facilities so that these expansionary measures lead to a reserve expansion of the banking system, which forms a basis for banks to begin lending. An injection of government debts is assumed to be translated into the process of bank credit money creation.

This monetarist thought fundamentally places the key essence of money as a medium of exchange in real economic process, which is labeled as a deposit-multiplying process in the banking system. Banks are seen as intermediaries between depositors and borrowers. As banks accept deposits by making interest payments, the deposits are established as a basis for bank lending. This assumes that 'banks cannot start lending without first having money deposited with them' (Ryan-Collins et al 2012: 19). In this regard, banks themselves do not contribute to the process of monetary creation. As the process of monetary creation is dictated by the process of real economic expansion, excessive monetary creation is sought outside banks. This understanding of modern banks is historically inaccurate. The

monetarist idea of outside money tends to place blame entirely on the role of the state when saving banks in financial crises, and it also assumes the injection of government debt as a natural process of monetary creation.

The problem with the process of exogenous monetary creation simply ignores the fact that 'only a small *fraction* of deposits (*liabilities*) from creditor customers are kept as a reserve out of which to pay these depositors' (Ingham 2004a: 139, emphasis original). That is, '[b]anks do not wait for deposits in order to make loans' (Ryan-Collins et al 2012: 20). As discussed in Chapter 5 and Chapter 6, the emergence of certificates of deposit clearly enabled banks to provide further credit money at a fixed capital. The revolution of the money markets in the 1960s and 70s freed banks from being dependent on the central bank when they needed money. If the interbank markets function smoothly, banks are able to manage their liabilities at the withdrawal of their customers. As clearly shown in the recent financial crisis, 'banks held just £ 1.25 in reserves for every £ 100 issued as credit [money]' (ibid: 7). Modern banks operate on fractional reserves.

Furthermore, the process of bank money creation involves the sale and purchase of various financial assets, such as mortgage-backed securities, because the purchase of financial securities requires money from banks or the interbank market. If a certain amount of profit is made in this financial transaction, it is possible to increase the capacity or credibility of noncommercial banks to borrow further and make profits. Commercial banks are willing to offer money to nondepository institutions during the growth of financial markets. Thus, as the demand for money as a whole increases, more money can be created. The detailed process of creating money in the sophisticated development of financial assets cannot be dealt with here, but it seems possible 'for banks to create money and credit out of nothing' (Ryall-Collins et al 2012: 101). The dominant process of modern money creation can be regarded as endogenous.

The central bank cannot control bank money creation. As discussed in Chapter 6, the Federal Reserve obviously failed to control the process of monetary creation during Volcker Shock, even though it brought high levels of inflation under control. Reflecting on the recent financial crisis, a massive injection of government debts does not necessarily translate into the process of bank money creation. Indeed, the Bank of Japan has issued a huge amount of government bonds and reduced interest rates to almost zero, but increased reserves of the banking system do not lead to the process of bank money creation. Coping with the recent financial crisis, the Bank of England exactly followed the traditional pattern of the Bank of Japan by aiming at banking reserve expansion, but it was not successful in getting banks to begin lending until it created Asset Purchase Facility, which used loans, offered by the Bank, to purchase British government bonds from the nonbank sector, including pension funds. This purchase in turn led to an increase in the Bank of England's deposits at commercial banks (Ryall-Collins et al 2012: 82). That is, the Bank did not aim to increase bank reserves but specifically targeted the nonbank sector. In this regard, it is then understandable that, unlike the Bank of Japan, the US central bank implemented unconventional measures, such as the purchase of financial assets from the nonbank sector in order to expand bank money creation. The assumption that the injection of government debts into reserves of the banking system translates into bank money creation needs to be reconsidered in the post-crisis situation.

Thus, the process of monetary creation is not entirely endogenous. The central bank can play an important role in the process of monetary creation. Given the post–financial crisis situation, the process of monetary creation greatly depends on how the central bank chooses to intervene in markets, as just discussed above. For example, in September, 2016, under pressure from the Korean government, the Bank of Korea decided to provide loans through quasi-public banks to specific shipbuilding companies in financial trouble. As Ryall-Collin et al (2012) noted, if a government is concerned with GDP-related growth, it would be appropriate to allocate bank credit money to the

nonbanking sector through various unconventional measures.

Outside the domestic context, this thesis emphasises that the global money market constitutes a hybridised process of offshore monetary creation in which both central banks and international banks interact with each other. As foreign central banks continue to accumulate US government debts, Treasury bonds in particular, US government debts, placed by foreign central banks, or the interaction between foreign central banks and commercial banks, creates a process of dollar-denominated debts, which are widely transferable to international banks in the offshore money market. Furthermore, the offshore money market not only attracts various dollar deposits from the rest of the world to be deposited for interbank loans, but it also relends dollar- or euro- or yen- denominated loans to the nonbank sector throughout the world. In this regard, the offshore money market produces offshore money, which can flow into the national money market. Thus, there is no clear-cut distinction between exogenous and endogenous money in the globalised money markets.

In sum, the overarching arguments of this thesis have significant implications for contemporary debates and research about the configuration of post-crisis global finance. The argument that the process of financial globalisation is underpinned by the three essential features of the US dollar as world money has implications for how the present role of the Federal Reserve is understood. That is, the unprecedented role of the Federal Reserve as a global market maker of last resort reflects how global financial markets are deeply underpinned by US government debts. In addition, the central argument about the rise of the dollar as a process of monetary transformation provokes a rethinking of how we might interpret the post-crisis role of the US dollar as world money. The contemporary debate over the dollar should be reframed to reveal various aspects of the US dollar. The argument that the creation of the dollar in the Euromarket is a hybridised process, in which central banks and international banks participate, has implications for how the processes of monetary creation are

understood. The globalised money market does not respect the boundary between exogenous and endogenous money.

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